

SKINDIVER

SKINDIVER MAGAZINE

A Magazine For

skin Divers and Underwater Spearfishermen

ARTICLES PUBLISHED

SEP 10 1968

REPS

Volume III

No. 9

September, 1968

25c



ANNOUNCING

Bel-Aqua's

LATEST RUBBER SUIT
MATERIAL DEVELOPMENT



As shown in the illustration the tough outer layer forms a protective surface over the inner layer of high quality rubber.

In addition to acting as a protective covering, this outer surface provides much stronger resistance against snags and tears.

When the two surfaces are permanently joined together as one sheet it becomes flawless, thus creating the finest rubber obtainable. Actual laboratory and field tests assure at least five times the normal life of ordinary rubber.

**ORDER BEL AQUA'S DURABLE NEW RUBBER SUIT
AT THE SAME ECONOMICAL PRICE!**

Fill in coupon and mail today

To: **BEL AQUA WATER SPORTS CO.**

3720 West 54th Street
Los Angeles 43, California
Box S-94

Please send me your new skin diving catalog which includes skin diving safety rules. Enclosed is 15c in coin to cover the cost of printing and mailing.

Name _____

Address _____

City _____ Zone _____ State _____

We are distributors for: U.S. Divers, Cressi, Swimaster, The Spearfisherman, Hope-Page Eng., Healthways and many others.

"For the very finest in rubber suits select Bel Aqua".



Facts On Catalina Skin Diving

By MART TOGGWEILER

This story, in substance, is the report on Jack Nichols' death as reported to the Coast Guard and Red Cross committee on water safety.

Many distorted versions of the circumstances surrounding the death of Jack Nichols seem to have been circulated. The following is an account of what actually is known about the accident.

The 'Maray' anchored in Goat Harbor, Catalina, about 1 P.M. on Sunday, June 27, with 17 passengers aboard, most of whom soon entered the water in search of fish, including Jack. In about an hour all the divers were either back aboard the boat or in the water nearby when a counting of heads in preparation to moving the boat showed one missing.

The identity of the missing diver was learned from Bob Baker, Jack's cousin, but Bob pointed out that Jack was an experienced diver and sometimes covered considerable distances in search of fish. So after getting everyone else aboard, the anchor was pulled and we cruised close to shore in the direction he was thought to have taken. Several of the divers had spotted black sea bass and Ron Merker had even lost his power head projectile and line pack in one out near the point of the cove known as Twin Rocks. We re-anchored about halfway between the cove and Twin Rocks and several divers entered the water including two with lungs to cover the 300 or 400 yards of kelp along the shore. The dinghy was also manned to aid in the search. Other boats in the area were questioned but no one had seen or heard anything indicating that a diver was in trouble. After about two hours of searching, the Coast Guard was notified via radio and they sent out a cutter from Avalon. It was still thought possible that Jack had gotten ashore somehow and was O.K. The search continued with the Coast Guard using a small boat off the cutter. The Maray left Catalina about 6:30 P.M. to return to the mainland while the cutter remained at the scene. The next day I was asked to go with county life guards aboard the rescue boat Bay Watch and the search by both aqua-lung and surface methods continued. The wounded black sea bass was seen and the line pack Ron had lost was recovered but nothing else turned up that day. Wednesday both the Bay Watch with several life guard divers and the Maray with volunteer divers aboard resumed the search. It was felt the body might have drifted into deeper water and Ron Merker and myself had only been in a few minutes with lungs when Ron, who was leading, spotted the body on the bottom at about 70 ft. depth and 100 ft. outside the kelp in open water. The body was brought to the surface and taken into Avalon aboard the Bay Watch.



This monstrous fish, a whale shark (Rhincodon typus), whose total weight was estimated between 20,000 to 30,000 pounds was speared by Robert P. L. Straughan . . . whoa, wait!! . . . was caught at Bimini in the B. W. I. by the combined efforts of four yachts. It is probably the largest fish ever caught as no harpoons were used. Huge meat hooks and gaffs brought the big fish to bay so that a tail rope could be attached and was then towed in. Straughan and Ralph Bowden took underwater movies of the fish while it was still alive.

All equipment including mask, snorkle, fins was intact except that the gun was missing. No weight belt had been used according to Bob Baker.

Those are the known facts surrounding the accident. The assumption is that Jack speared a fish and for some reason failed to get back to the surface. He had about three years experience and Bob reported he was capable of reaching depths of 40-45 feet skin diving.

Possible he hung on to the gun too long and blacked out before reaching the surface. The missing gun seems to strengthen this possibility.

At least two measures might have prevented this accident. First, if the "buddy system" had been used, recovery could have been accomplished in a matter of minutes. However, in all fairness it must be pointed out that working in pairs makes it more difficult to approach bigger fish, requires that one man stays on watch while the other dives and that both leave the water when one gets cold.

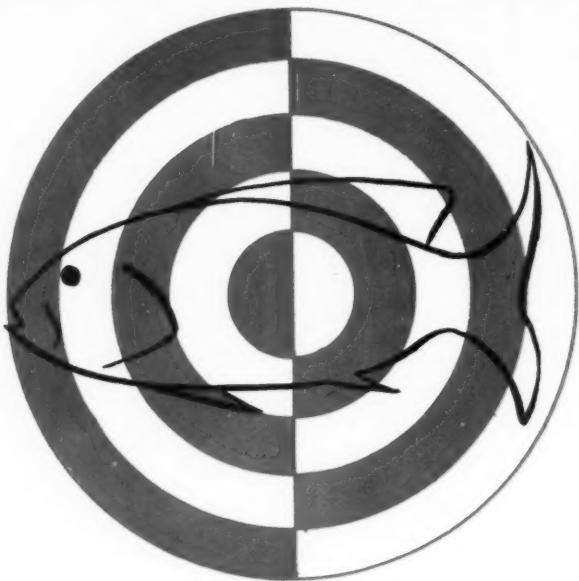
Secondly, if some sort of inflatable float had

been carried or even secured to the gun, it could have been inflated and the buoyancy utilized not only to get to the surface but to play the fish as well.

Just as a parachute has saved many flier, a CO₂ float or CO₂ type "Mae West" jacket can be a life saver for skin divers. However, if using a lung there is the dangerous possibility that the float might accidentally inflate and force the helpless diver to the surface too rapidly, causing ear injury and, more seriously, air embolism. Another thing to avoid while using CO₂ life belts or "Mae West" jackets is not to have any harness straps, weight or knife belts, etc. over them or they will literally squeeze the breath out of you when inflated.

In any case the best lesson we can all learn from this accident is caution. It's odd the way some people would be appalled, for example, at the thought of skiing down a steep slope where the worst to be expected might be a broken leg, but will cheerfully expose themselves to sudden (and permanent) death by indulging in unsafe practices while skin diving. ■

GET *that* FISH



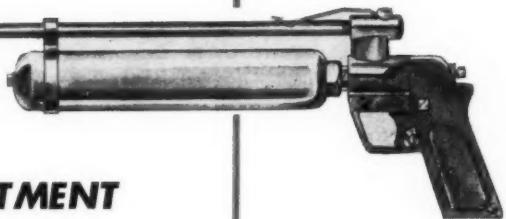
with the **MARK VII** CO2 GUN

Featuring

NEW EXTERNAL POWER ADJUSTMENT

Plus

- ★ All working parts stainless
- ★ CO2 powered
- ★ 40 shots per cartridge
- ★ Metered valving trigger device
- ★ Spring loaded safety
- ★ Can be loaded under water
- ★ Light weight - Pressure Safety



PRICE

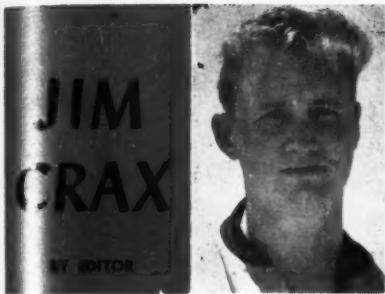
\$ 47 50

PACIFIC SALES, INC.

611. HILL AVE.,

FULLERTON, CALIFORNIA

**ASK YOUR
DEALER**



School and college addicts are reminded to change their address before returning to the ole alma mater. If you don't, the post office boys will tear the magazine to shreds and return just a small portion of it as evidence that you don't live there anymore. Change of Address cards are available at all post office windows, and we will appreciate hearing from you before you move. This same card works for the servicemen also. For prompt delivery, drop us a card.

We welcome constructive criticism regarding the format of the magazine. Any ideas you have about the type of articles and pictures needed will be received with tight lips and an open mind. Do we hear any volunteers in the East Coast and Florida Associations for a column similar to the one Gene Daniels submits each month, "Council Diver of the Month". Surely there are people within these organizations capable of this feat...there are many individuals working for these regional organizations that deserve the spotlight once in a while. Perhaps a publicity chairman should be appointed for the job!!

Want to thank you for the wonderful response we have received on the two year subscriptions. New and renewing subscribers are taking advantage of this \$5.00 deal—have you?

Reminiscing . . . can you remember when The SKIN DIVER Magazine had 12 pages, including the cover? The thanks goes to you, the readers and to the advertisers who have made this possible. Your help is still needed . . . patronize the advertisers, mention the magazine. They want to know that you are receiving their message to you each month and that you are reading it. Mention the magazine to your diving companions and club members . . . have them get a copy of their own and stop making off with yours!! Subscription blanks are easy to fill out, name, address, etc.,—simple!!

Something new . . . starting with the present volume, Volume III, we are going to have this volume bound with a sturdy library-canvas cover. The price will be \$8.00, so if you want

one of these for your book shelf or library, order soon as there will be a limited number of these volumes made. Binding will start immediately after the December, Number 12, issue is published.

Just a few of the fortunate ones were able to attend the Nationals at Key West, August 29. Let us hope that these teams from all parts of the country worked and played as hard as they could to bring about the formation of the NATIONAL UNDERWATER SPEARFISHING ASSOCIATION. Thorough understanding of each others problems back home . . . the will to win . . . spearfishing in those lucrative Florida waters and the American competitive spirit should bring about the formation of something. Next year will tell!!!

Full recognition will be extended to all sponsors of the teams that competed in the Nationals here next month. Competing teams should be glad there are companies, organizations and individuals that want to help financially. Get their names in to us soon. All sponsors will receive equal space.

From "Times of Malta", Thursday July 22, 1954 . . . Admiral Mountbatten's Capture . . . We hear that late on Tuesday evening, Admiral the Earl Mountbatten of Burma harpooned a large poisonous sting ray off Comino at a depth of 50 feet. This fish, which took half-an-hour to land, weighed 230-lbs. and measured 5-ft. across and 8-ft. long.

Dr. Harold E. Edgerton of the Massachusetts Institute of Technology recently descended 1700 feet into the Mediterranean in a French Navy bathyscaphe. The 1700 foot dive was made to investigate and photograph the "deep scattering layer", a false bottom recorded on echo sounders.

SEPTEMBER COVER

SCHOOL DAYS—Jerry Greenberg, underwater photographer of Miami, Florida, submitted this appropriate cover picture, taken off the French Reef, Florida. Depth for the shot was 35 feet and the sun was hidden by a cloud. Camera used was an underwater Rolleiflex, f.11 at 250th of a second. Time, practice and patience produce picturesque perfection in perspicuity. (Thanks to Webster).

The SKIN DIVER

P. O. Box 128, Lynwood, California

Vol. III September, 1954 No. 9

Copyright 1954 by The SKIN DIVER

Entered as second-class matter at the post office at Lynwood, California

Published by The Skin Diver, P. O. Box 128, Lynwood, California, U.S.A. each month for the purpose of creating further interest in skin diving and underwater spearfishing and to provide an advertising medium for manufacturers and retail merchants of equipment used by underwater fishing and hunting enthusiasts.

JIM AUXIER

Editor

Phone: MEtcal 3-7851

CHUCK BLAKESLEE

Assoc. Editor - Advertising Mgr.

Phone: NEwmark 8-6203

DEADLINE FOR ALL COPY

Tenth day of month preceding date of publication.

When making change of address give both new and old address

Advertising rates upon request

CLUB REPORTS

are submitted each month by club publicity representative and consist of one typewritten page, double spaced, 300 words per report.

Address all correspondence to:

The SKIN DIVER
P. O. Box 128
Lynwood, California, U.S.A.

Manuscripts and material are submitted free and released for publication, becoming the property of The Skin Diver unless previous copyrights exist. The Editors do not necessarily agree with, nor stand responsible for, opinions and statements expressed or implied by others than themselves.

Printed by Chambers Printing Company, 7868 California Avenue, Huntington Park, California.

SUBSCRIPTION RATES

One Year - \$3.00 Two year - \$5.00

Outside U.S. (one year) - \$4.00

British Subscription Representative:

Peter F. Hobson
79, Southbrook Road, Countess Wear

Exeter, England

One Year Subscription Rate: 25/5

EXPERTS USE THE
EXTRA LARGE GIANT
NOW CUSTOM BUILT TO FIT
YOUR FEET

Only \$5.00 Extra — Send outline of your feet
FREE EAR PLUGS and CATALOG

DUCK FEET

THE
Spearfisherman
7521 Clay Street
Huntington Beach, California

SPRING SECRETS SPRUNG

By JOE CARMICHAEL & MARCIE ALBA

A group of New Orleans Divers traveled to Florida's Wakulla Springs recently to add another "first" to their list. The odd part is that they didn't know they were doing anything exceptional until the whole thing was over.

Wakulla Springs, 15 miles south of Tallahassee, is pegged as the "largest and deepest self-flowing springs in the world, supplying enough water to form a whole river," according to Dick Alba, one of the divers who explored the murky interior of the water source.

On the history-making expedition were Alba and his wife, Mr. and Mrs. J. H. Bonck, Jr. and Mr. and Mrs. Roland Riviere, Jr., all members of the Dixie Divers Club.

Descending about 250 feet into the spring, the divers became the first swimmers to probe the unknown depths of the famous natural phenomenon. The water enthusiasts were just looking for a place to dive when they went to Wakulla Springs. They were equipped with six lungs as well as four 360 cu. ft. air cylinders. They obtained permission from the manager of the property, strapped on aqua-lungs, and slid into the clear water.

Over the lip of the cliff which slopes back to form the beach, the divers faced a perpendicular drop of 185 feet to the spring floor. "Looking down," one of the group said, "made us feel like we certainly would fall to the bottom." After paddling to the floor of the cave, four of the divers discovered the main opening sloped back at a 45 degree angle under the overhanging cliff. Marcie Alba left the three men at 160 feet. (She had a ladies aqua-lung with a smaller air supply.) They followed the natural shaft toward its black beginning. Every few yards they had to stop to let their eyes become accustomed to the lack of light.

At 200 feet, water pressure crushed a $\frac{3}{8}$ in. plexiglass 16mm movie camera case. Johnny Bonck returned to the surface and brought back another $\frac{1}{2}$ in. plexiglass case later. Right after the camera case collapsed the divers thought they had found the source of the unexplored springs. Rocks, which had tumbled from the

BOB RIVIERE, Dixie Diver, photographing a petrified log near the bottom of Wakulla Springs, Florida. The divers penetrated the springs to approximately 250 ft.



cliff above, had built up to within a few inches of the ceiling.

"From a distance," Alba says, "It looks like the end of the springs. But Roland and I stuck our heads over the barricade and saw a huge inner cave."

Past the entrance to the inner cave—which is about as long as a bus broadside, according to Riviere—depth gauges read 220 ft. On down the divers went, enraptured by the sight of bizarre limestone formations, fish hanging like fruit from the cave roof, many eels gliding effortlessly by. Glimmering at an angle far above was the thin bright line that marked the surface.



DIXIE DIVERS CLUB, New Orleans, La., left to right, Roland Riviere, Mary Lou Riviere, Marcie Alba, Dick Alba, Jeanne Bonck and Johnny Bonck.

"Several times," Riviere remembers, somewhat wistfully, "I almost got panicky when I couldn't see the surface light for a few minutes. It would have been an easy matter to have gotten lost."

Depth gauges the two boys carried end at 220 feet. Alba and Riviere figure they must have continued downwards at least another 30-40 feet before lack of light made them turn back. The final moments taxed the aqua-lung air supply nearly to the limit. On the way up (after a slow ascent for their own protection) the divers switched on their emergency reserve and surfaced.

On top, T. E. Stone, manager of Wakulla Springs Lodge and of the springs, told the divers that no one ever before had gone more than about 120 feet into the spring, the depth attainable by life guards' air hoses. The Dixie Divers had been the first humans, according to Stone, to explore the innermost depth of the springs.

How do the divers feel about their accomplishment? They aren't saying.

"We have hopes," Dick Alba says, with Riviere vigorously nodding his agreement, "of going back with underwater lights and double lungs and really getting farther down to the bottom of things."

Oceanic Research Associates

have now opened up an office on the North-Eastern coast. All shallow water diving subjects will be covered by the Deep Sea Dives! and/or through personal requests, as:

Announcing the production of new equipment
Testing and evaluating new equipment
Instruction and testing of underwater sports
Announcing publication of books, magazines and articles on sub-marine life
Publicizing club activities and organizations

Write to:

Stephan Tjaarda, Director
NORTH-EASTERN DIVISION
Oceanic Research Assoc.

315 Pearl Street Hartford, Connecticut

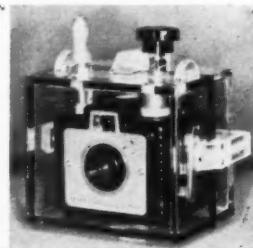


Camera Cases

BOLEX — LEICA — HOLIDAY
\$29.95 up — SEND FOR FREE LITERATURE

Underwater Sports, Inc.
Formerly Marineland, Inc.

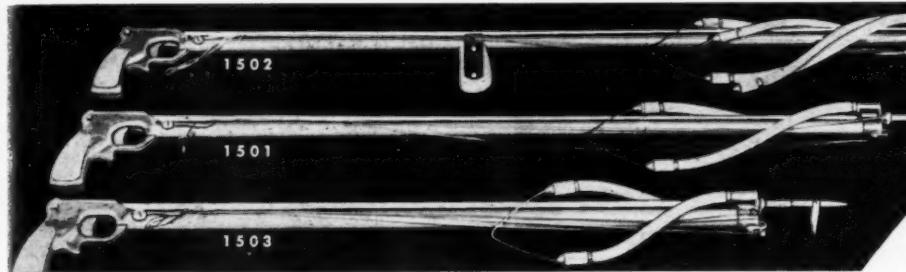
2219 BISCAYNE BLVD. PHONE 3-7966 MIAMI, FLORIDA



Announcing...

the new amazing

LOW PRICES on the world famous ARBALETE

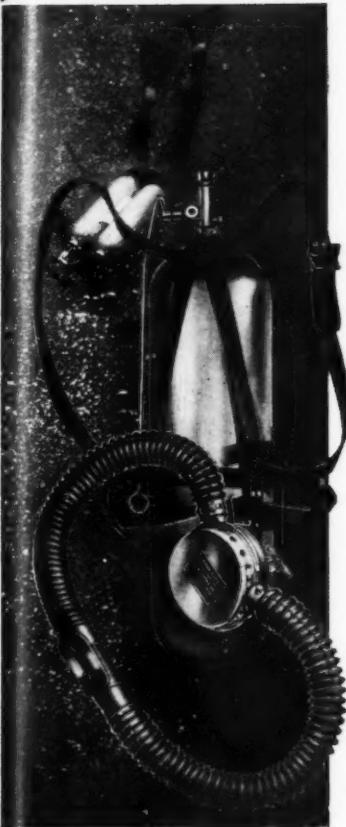


DELUXE 24.95

STANDARD 19.95

JUNIOR 17.50

BABY 13.95



Here is the AQUA-LUNG

Invented and used by Capt. Cousteau (author of the best seller "The Silent World"). The "Aqua-Lung" is not an experiment; it has been used for eight years without one single casualty traced to a mechanical failure. It is standard equipment in the French, Canadian, British and U. S. Navies, and the Universities of Washington, Wisconsin, Stanford, Berkeley, Texas, M.I.T., U.S.C., U.C.L.A., Pomona College, Pacific Oceanic Fishery Investigations, Fish and Wildlife Service, U. S. Dept. of the Interior, Bureau of Reclamation, Scripps Institution of Oceanography, fire departments, American Red Cross, shipping companies, harbor commissions, lifeguards, 20th Century-Fox Film Corp. (as in their masterpiece "The Frogmen"), and by thousands of yachtsmen, sports and commercial fishermen.

The most momentous invention since the conquest of air, the "Aqua-Lung" opens up a new and richer world to the pioneers of our generation. You too can enjoy the exhilarating experience of neutral buoyancy and, like fish, escape the laws of gravity . . . effortless motion in any direction!

Do not trade your life for a few silver pieces . . . why take a chance? Dive with the "Aqua-Lung" of proved performance.

All units complete for immediate use.

JUNIOR (1/2 hour — no reserve) \$125.00

STANDARD (1 hour — air reserve) \$160.00

NAVY TYPE (2 tanks plus reserve) \$260.00



Squale

Navy type, unsurpassed in design and quality, with short, soft skirt; comfortable fit on the most sensitive faces. Will seal on frogman suit. Widest field of vision, solid stainless steel rim, shatterproof glass—the best insurance against accidents to the eyes. Of the seven American and foreign swim type face masks tested by the U. S. Naval Underwater Motion Picture Dept., U. S. Navy, only one, the French "SQUALE" face mask was found satisfactory. \$4.95



Pirelli

Exclusive distribution of the famous Pirelli (Vulcanized) diving suit presently used by the Frogmen. With Hood \$70.00

U. S. DIVERS CORPORATION

1045 BROXTON AVENUE

ARizona 9-8750

BRadshaw 2-1596

WEST LOS ANGELES 24, CALIFORNIA

Underwater - -

Puerto Rico

(as reported by a former Californian)

By HOWARD TEAS

The author came to Mayaguez Puerto Rico from Southern California, where he had been diving about four years. Since his arrival in Puerto Rico he has logged some twenty diving trips in the Caribbean on the South and West Coasts of the Island. This account is from his admittedly limited experience but to some extent draws on the experience of diving companions.

In Puerto Rico the early morning is regarded as the best time to dive because of the trade winds which freshen later in the day. We stumble around in the dark at 5:30 or 6:00 a.m. (sometimes as early as 4:30) and then drive from 10 to 40 miles to a fishing spot. One of the four spearfishermen at the Federal Experiment Station has a 12-foot semi-V boat and trailer that we often use. Two of us have outboard motors, so we sometimes plan separate trips and rent a 12-15 foot "yola", as the native skiffs are called. The Puerto Rican fishermen are a little skeptical of us spearfishermen and usually insist on going along with their boats, so we have a boatman thrown in with the boat rental.

Ordinarily, trips are made to reefs lying a quarter mile to four or five miles offshore. Most of the reefs near shore are poor fishing territory. To get to them from shore one must wade long distances over sharp coral and poison-spined sea urchins in water too shallow to swim. In addition, the water close to shore is more often murky and the reefs are apt to be fished out. On trips to reefs several miles offshore we take the weather into account. A few weeks ago four of us were caught in a violent rainstorm which closed in so badly that for half an hour we saw nothing but whitecaps as we worked the bailing cans to stay afloat. Luckily we were inside a long reef and less than half a mile from shore.

If we have no boatman, we take turns handling the boat and keeping track of the divers. We usually pull in close to a reef and start at the upcurrent or upwind end, working the inside or outside depending on the surf and past experience as to the best fishing territory. The bottom is variously rock, staghorn and other tree-type and brain coral as well as sea fans and a great variety of smaller corals with intermittent patches of sand. There is very little seaweed and no large kelp. The usual diving depth is 15 to 35 feet, although the shallower water inside of the reefs is sometimes quite pro-

ductive. The water clarity that my friends consider minimal is about 15 foot visibility; 30 feet has been about average so far. The water temperature has been in the high seventies or low eighties to date and I can truthfully say that I haven't even momentarily missed that paralyzing, bone-chilling stuff that washes the California coast.

The technique for spearing fish is to swim and drift along until you spot one (or several), then quietly surface dive and swim after him. Here, with extensive forests of coral into which your quarry can and usually does vanish, you will probably have just one chance at the fish you see, so a cautious approach is necessary. We see a great many fish. For the most part they are too small to bother with (less than 2 or 3-lbs.), or are varieties we don't care to spear, such as the parrots, spadefish, angels and other brightly colored reef dwellers.



TOM THEIS, champion Mayaguez grouper spearer, holding a 24 pounder. Merou-sized Dennis Warmke inspects the catch.

Around the rocks and coral we are principally interested in hogfish, snappers, and merous or groupers. Hogfish are quite easy to approach; most of them weigh from 4 to 12-lbs. We see occasional snappers that probably are 50-lbs. or more, but it is only the smaller ones up to about 15-lbs. that we have been able to spear. The usual merou is from 2 to 10-lbs., but some are larger; I've seen half a

dozen over 30-lbs. We occasionally see very large groupers.

Several times per trip when working a reef in fairly shallow water you get a feeling that you are being followed. That's when you look around to see a toothy barracuda within easy spear range behind you or off to the side. Turn or make a move with your spear and he swims just out of range and escorts you for a while. Sometimes after we've fired at him and missed, and while we are recocking or reloading, the barracuda will swim by very close opening and closing his mouth, giving you a view of those pointed teeth and a savage glare. It is the kind of a look that makes timid divers take up golf! Then he's back in the haze just below the surface, out of range.

If one is prepared, he can sometimes get a shot when the barracuda is first seen; otherwise, about the only way of getting him within range is by trickery. Sometimes you can watch him out of the corner of your eye as he escorts you and slowly swim by a large coral mass in such a way that you gradually cut him off. This forces him to ignominiously turn around and retreat, which seems to go against the grain with the local barracudas, or else lets you get closer, maybe near enough for a shot. Then there's the system of keeping watch when your buddy spears a fish. Sometimes the barracuda will be less cautious and offer himself for a target as he closes in on a thrashing fish.

Besides the bottom fish and barracudas, the reef and vicinity is the home or resting place of several other interesting creatures. These include the sea turtles, lobsters, nurse sharks, and rays. Turtles we see occasionally; to date I've speared two. When it is properly prepared, turtle soup is a delicacy well worth the effort involved.

The lobsters (langostas) here are the clawless spiny kind, that are very similar in appearance to the ones of Southern California. They ordinarily run from 2 to 6-lbs. It is said that without refrigeration the tails keep better for short periods than the whole body, so we tear off the tails and discard the rest. As in California, we don't just swim along looking for fish and expect to see a lot of lobsters. One has to look for them; not necessarily by diving, but by keeping a sharp eye out for the tell-tale ends of the feelers. At first I bowed to the local custom of spearing lobsters, but felt guilty; it seemed unsporting to spear the defenseless critters. After taking a couple that way, I located a good area and laid my spear on a coral ledge while I pursued langostas in a "worthy", that is, California fashion. A handful of feelers and one small lobster later, nursing numerous coral stings and cuts I swam back for my spear and took stock of the situation.

To begin with, it seemed obvious that while the tropics are alleged to make people take it easier, the warm waters of the Caribbean had no comparable effect on the langosta population. One false move and they take off through the back entrance just like their cousins at Palos Verdes or Laguna; furthermore, an antenna hold gets you just a little lobster meat as in California. And the Puerto Rican lobsters have the edge on the California ones in an important regard. Here they are apt to be holed up in caves or crevices surrounded by stinging coral, and sea urchins as well as morays. Just brushing one of those corals makes you appreciate

see very
g a reef
ing that
you look
in easy
de. Turn
e swims
a while.
l mised,
ding, the
ing and
of those
the kind
up golf!
the sur-

es got a
therwise,
ain range
atch him
ports ou
in such
off. This
ound and
the grain
you get
ot. Then
hen you
arracuda
lf for a
hand.

das, the
place of
these in-
arks, and
late I've
red, tur-
ffort in-

the claw-
appearance
ia. They
is said
up better
, so we
t. As in
looking
ers. One
by div-
the tell
d to the
elt guil-
defense-
t way, I
ar on a
as in a
A hand-
er, nur-
I swim
the sit-

at while
take it
ean had
popula-
through
s at Pa-
antenna
as in
ers have
important
d up in
ng coral,
t brush-
ppreciate

the name "fire coral". (California divers can visualize the situation by substituting a strand of poisoned barbed wire and a few double edged razor blades for every leaf of kelp around their favorite lobster holes.

Here, as in Southern California, the commercial catch so far exceeds the skin divers' take that it seems unnecessary to get scratched and stung for reasons of conservation. After considering the pros and cons of spearing lobsters, I decided to spear them if they are too inaccessible to grab, first looking closely to avoid taking egg-bearing females. In reaching this decision I must admit being guided by a strong feeling that, but for the California Fish and Game Code and the vigilant patrolmen who enforce it, there'd be few California divers virtually insisting that lobsters be taken only by hand.

A third interesting reef inhabitant is the nurse shark (*Ginglymostoma cirratum*), locally called "gata". The gata is a docile, harmless shark that spends his time sleeping under the sandy edges of coral heads or lazily swimming around looking for a snoozing place. Gatas make up a goodly proportion of the sharks taken by spearfishermen, judging from photographs in the Skin Diver. Gatas seem to be much thicker through the body than the ordinary sand or leopard shark; a six foot one might weigh 80 or 90-lbs. One's first contact with a gata can be interesting. You are apt to be searching under coral ledges for lobsters and brush your facemask into the end of a foot or two of pectoral fin or tail. As you back off to where you can focus, it becomes apparent that what you brushed against really was a shark fin!

We usually see a gata or two every trip along the South shore and sometimes half a dozen. In spite of their fundamentally calm dispositions, it is possible to try a gata beyond his endurance, as I found out with an eight footer of Guanica. After I'd prodded this fellow three times with the hand spear, he became angry and if he didn't attack, gave a good imitation of it. Fortunately I succeeded in parrying him with the spear and he quit after a couple of passes, though for a few moments things seemed to be out of control. Another time when I had just speared a pompano, suddenly two gatas each about five feet long appeared and tried to eat my fish off the spear. I like pompano too, and

wasn't about to give him up. But as the gatas thrashed around at my feet clumsily trying to get the fish that I kept snatching away, it was difficult to remember that they are harmless.

Other sharks aren't numerous in the relatively shallow water where we dive. However, anyone who dives along the seaward side of reefs, where the water gets deep, sooner or later sees large sharks. My casual acceptance of gatas led me to an unintentionally close view of a "real" shark about twelve feet long. From quite a distance off I saw a shark swimming over a sandy patch among some coral. Since this is a typical habitat for the gata, I didn't pay much attention. I like to bully gatas, so when I was near him I dived to look at this giant. As I closed in to where I could easily have speared him, I noticed that this shark was grey, not brown, and he didn't have any barbels at the corners of his mouth; furthermore, his first dorsal fin was located just about the center of his body, and he had two hitch-hiking remoras. It didn't take me long to realize that my sleek friend was not to be bullied.

I surfaced and excitedly called to my companions to "come look at the twelve-foot man-eating shark". Somehow I must have phrased it wrong, because nobody came and when I looked around both my buddies were in the boat, (fixing a broken spear they said). After a couple of minutes the shark swam off through a valley in the coral and disappeared into deep water. Subsequent checking established that he



TOM MUZIK holding a fairly typical day's catch of Snappers and Hogfish, speared by Howard Teas and Muzik.

slowly swim below one, sometimes giving the impression that they are staying near you for the company. They may let you dive near them without taking fright, but try to quietly swim behind one of them and grab the end of his long black tail if you want to see how fast he can swim. Other sting rays, often quite large, are to be found partly buried in the sandy patches among the coral where we usually leave them undisturbed.

Over the deeper reefs we see the fast moving open water fish, the schools of jacks, pompano, silvery tarpon, and the cojinudas and sierras or Spanish mackerel singly or in pairs. These are all game fish that put up a real fight. Sometimes after spearing one of them the whole school will mill around you as their stricken member fights for freedom.

The diving trip that began with the ringing of an alarm clock an hour before dawn is usually over by one or two o'clock in the afternoon. Two or three divers can spear 20 to 50-lbs. of good eating fish and get maybe five or six lobsters in a trip. Most of us are more concerned with quality and large size of fish than with total weight of our catch.

Portuguese man of war jellyfish have not been common so far. But sometimes avoiding the numerous stinging jellyfish takes precedence over searching for fish. Since the jellyfish are mostly concentrated near the surface we do a lot of diving on days when they are abundant.

From movies that I was fortunate enough to see at Los Angeles Neptune meetings the last couple of years, I'd say that diving around this part of Puerto Rico is by no means up to the good spots in the Florida Keys or La Paz, Baja California. But for reasonable clear warm water, delightful underwater scenery, and fairly abundant fish and lobsters, Puerto Rico is hard to beat.

In August a diving club "Los Caballeros del Mar" was organized in Mayaguez. The club is quite informal and has about a dozen members to date. We have as our purpose creating good will for skin divers and collecting data that may be useful at some future time if seasonal and other limits are proposed. ➤



TOM THEIS, 27-lb. Merou and HARRY WARMKE, small Tarpon.

HENRY HUYKE with a 6-lb. Barracuda. Henry, who coaches basketball at the College of Agriculture, is an ardent spearfisherman.

belonged to the requiem shark family, a family well represented in tropical waters and not lacking in "black sheep".

About a year and a half ago a local diver, the librarian of the College of Agriculture and Mechanical Arts, was attacked and very seriously lacerated on the leg by a shark at Mona Island off the West Coast of Puerto Rico. He was trailing a string of fish which apparently provoked the attack. Fortunately he received prompt medical attention via a plane dispatched from Ramey Air Base and is alive today, still a spearfisherman.

Line fishermen have been known to put out slaughter-house refuse as shark chum along the seaward reefs the day before they want to fish an area. It is conceivable that a diver inadvertently coming upon such a place at a time when sharks were voraciously feeding might be in for trouble. As long as there are sharks there is at least a small element of danger in spearfishing off Puerto Rico.

Rays also inhabit the general area around and among the coral reefs. The most spectacular are the beautiful spotted eagle rays that

BOOK

REVIEW

4,000 YEARS UNDER THE SEA—The story of Marine Archaeology—by Philippe Diole. Translated from the French by Gerard Hopkins. Illustrated. 237 pp. Julian Messner, Inc., New York. \$4.50.

By R. K. AWTREY

Throughout the several thousands of years known as ancient history, the Mediterranean was the principal highway for the commerce of the bordering lands, serving the Cretans, the Greeks, the Phoenicians, and the Romans, each in their turn as they became the dominating power upon this sea. As high-seas navigation was then an unknown art, the ancient ships, in their voyages from one end of the Mediterranean to the other, for the most part followed the coast lines. And when the gales founndered these ships, often in numbers up in the hundreds, they sank in comparatively shallow water where now modern man, with the underwater mobility afforded by the Aqua-Lung, can explore the remnants of these wrecks.

In *4,000 Years Under The Sea*, Monsieur Diole introduces us to this latest form of ar-

chaeology and he takes us to most of the known sites of ancient wrecks and harbors in the western Mediterranean. In spite of the great fleets of ships that history tells us were lost on many occasions, only a few of their remains have so far been discovered. No doubt, however, twice as many will be discovered in the next two years as have been found in the last 20, thanks to skin diving.

To be a successful underwater archaeologist, the author points out, entails far more than the mere removal of objects from the scene of the wreck. After the items have been retrieved they are given an intense study to determine the date of the wreck, where the ship was built, its port of departure, and its destination. It is fascinating how little shreds of evidence can be pieced together to get what is at least a probable history of the ship.

For example, the cargoes of the "round ships" or *corbitae* often consisted of *amphorae*, large earthenware jugs containing wine, olive oil, or fish preserved in brine. There are some 49 classifications of the *amphorae* by size, shape, and neck and handle detail, and each type indicates a certain locality and period. Fur-

thermore, the maker's trade marks were stamped on the necks and, in the case of *amphorae* made during the centuries of the Roman Empire, the names of the consuls in office in that year were also inscribed, enabling the containers to be dated exactly.

Perhaps the most famous wreck which Diole describes was that found off the small Tunisian port of Mahdia by a sponge diver in 1908. Six expeditions have visited the site since that time, the last being in 1947. The objects retrieved from the wreck now fill six rooms in a Tunisian museum. They include several bronze and marble statues and much marble work, both statuary and such items as twelve-foot columns. It was determined that the cargo had been shipped from Athens, Greece, but what its destination was to have been has never been agreed upon. The wreck is attributed to several specific dates by different theorists but all these dates are in the first century BC.

M. Diole, director of underwater archaeological research for the French National Museums, is, as you might suspect, as much at home in the museum as underwater. Therefore, as well as taking us underwater with him to explore the sites of the old wrecks, he also takes us to the museum laboratory to determine what each item we find can tell us. The shape of the *amphorae*, the style of the statuary, the chemical analysis of the ship's nails, all of these clues tell us something of the ship in question and make the book a fascinating reading for one who is interested in marine archaeology or in the histories of the ancient nations that bordered the Mediterranean. ➤

How to beat the high cost of cold water? with a "SUIT YOURSELF"

RUBBER SUIT KIT

"SUIT YOURSELF" kits are the original, time tested kits and are preferred by experienced divers everywhere.

105 Full Suit \$19.95
(Including Connecting Ring)
105A Jumper Only 10.00
105B Pants only 10.00



Check these exclusive features

- Simply designed for freedom of movement and quick, easy assembly. ONLY 10 SEAMS. Anyone can assemble.
- Extra tough rubber especially treated to be salt water and sun resistant.

Kits are complete with precut rubber, cement, patches, seam roller, extra scrap rubber and detailed, simple instructions.

106 "Shorty" \$13.95
(Including Connecting Ring)
106A Jumper only 7.00
106B Pants only 7.00

So. Calif. Distributor
D. L. DAVIS CO.
3510 Manor St.
Los Angeles 39, Calif.

Elsewhere write for our illustrated brochure

SUIT YOURSELF

LONG BEACH 7, CALIF.

P. O. BOX 7155

AVAILABLE AT THE FOLLOWING DEALERS

American Diving Supplies
Redondo Beach, Calif.
Aqua Sports Shop
Santa Cruz, Calif.
Arthur's Toy Shop
Fresno, Calif.
Ball & Frank Sporting Goods
Long Beach, Calif.
Belmont Pier Company
Long Beach, Calif.
Barnes Marine Supplies
Long Beach, Calif.
Burbank Sporting Goods
Burbank, Calif.
Cycle & Sport Shop
Santa Monica, Calif.
Frank Eicholtz
San Diego 5, Calif.
Aaron Ferer
San Diego, Calif.
Hanson-Waddington
Oceanside, Calif.
Hollywood Sporting Goods
Hollywood, Calif.
Lyle Hoskin & Sons
Newport Beach, Calif.
Jeff's Sporting Goods
San Gabriel, Calif.
Kerr's Sport Shop
Beverly Hills, Calif.
La Jolla Sporting Goods
La Jolla, Calif.
McCaffrey Brothers
Santa Barbara, Calif.
William Morrison Hardware
Riverside 1, Calif.
Newport Tackle
Newport, Calif.
Phelp's Sporting Goods
La Jolla, Calif.
Piet's Sporting Goods
Laguna Beach, Calif.
Rankin's Sporting Goods
Ventura, Calif.

Ray's Sporting Goods
Downey, Calif.
Schwartz Western Auto
Gardena, Calif.
Sea Dog Sport Goods
San Diego 8, Calif.
Ski Den
Bakersfield, Calif.
Sporthaus
West Los Angeles, Calif.
Sportland
Pasadena, Calif.
Sportsman's Exchange
Culver City, Calif.
Sportsman's Paradise
Whittier, Calif.
Star Sporting Goods
Hollywood, Calif.
United Sporting Goods
Los Angeles, Calif.
Water Gill Products
Venice, Calif.
Mil Zillgitt
Inglewood, Calif.
Gardena Sporting Goods
Gardena, Calif.
Grimes Sporting Goods
Norwalk, Calif.
Spence's Bike Shop
Compton, Calif.
Freed Sales
San Diego, Calif.
Bill's Sports Den -
Downey, Calif.
Maris Western Auto
La Habra, Calif.
Quality Sporting Goods
Hawthorne, Calif.
Sport Diver Co.
Milwaukee, Wisconsin
Aqua Sports Divers
East Detroit, Michigan
International Trades
Montreal, Canada

the stamp
mpborde
man Em
e in that
ontainers

ch Dole
Tunisian
908. Six
ence that
jects re
oms in a
l bronze
e work,
foot col
rge had
what its
ver been
o several
all these

ecological
rums, is,
e in he
well as
lore he
as to be
ach it
phorbe,
analysis
tell us
and make
who is
the his
ered the



NOW AVAILABLE at a NEW LOW PRICE

\$19.95

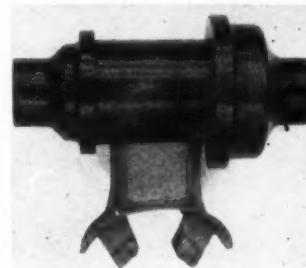
Hope-Page Engineering Corp. wishes to thank everyone for the WONDERFUL ACCEPTANCE they have enjoyed on their NON-RETURN MOUTHPIECE "SAFETY FIRST" For use with underwater breathing apparatus of the Aqua-Lung type.

Due to the large increase in manufacture it is now possible for us to reduce our price *without reducing our quality!*

Formerly \$24.95 now reduced to \$19.95



NO MORE Panic from losing mouthpiece
NO MORE Water filling breathing hose
NO MORE gurgling from water that has seeped in around mouthpiece
SAVES AIR because it allows the exchange of Snorkel and mouthpiece while face is submerged



Our mouthpieces are being DISTRIBUTED through U. S. DIVERS CORP., makers of the famed AQUA-LUNG.
Mouthpieces may be seen or purchased at the following locations.

U. S. Divers Corp.
1045 Broxton Ave.
Los Angeles 24, Calif.

D. L. Davis Co.
3510 Manor St.
Los Angeles 39, Calif.

Hoffman Hardware Co.
6625 E. Washington Blvd.
Los Angeles 54, Calif.

Bel-Aqua Water Sports Co.
3720 West 54th St.
Los Angeles 43, Calif.

Aqua Products
2009 Monroe St.
Toledo 2, Ohio

Aqua-Gun Co.
1121 No. Broadway
Yonkers, New York

Aquatic & Diving Equipment Co.
2869 Pontiac Trail
Walled Lake, Michigan

Fenjohn Underwater
Photo & Equipment Co.
90 Cricket Ave.
Ardmore, Penna.

Diving Corp. of America
722 S.W. 8th St.
Miami, Fla.

Colee Sales Co.
Show Room
712 South Olive
Los Angeles, Calif.

Aqua Sports Shop
214 River St.
Santa Cruz, Calif.

Proctor's Sporting Goods
128 W. Broadway
Long Beach, Calif.

Pacific Supply Co.
524 N. Hawthorne Blvd.
Hawthorne, Calif.

Stony's Fish & Tackle
25 South Pico
Long Beach 2, Calif.

Sporthaus Westwood
1057 Gayley Ave.
Los Angeles 24, Calif.

Weatherby's Sporting Goods
2781 Firestone Blvd.
South Gate, Calif.

Dolphin Mfg. Co.
9642 E. Artesia Blvd.
Bellflower, Calif.

Divers' Supply
1150 Wilmington Blvd.
Wilmington, Calif.

Glo Bldg. & Supply Co.
15113 Martha St.
Van Nuys, Calif.

Mel's Aqua Shop
1911 So. Catalina Ave.
Redondo Beach, Calif.

Kelly's
2505 Telegraph Ave.
Oakland 12, Calif.

John F. Arnold & Co.
5319½ Hollywood Blvd.
Hollywood 27, Calif.

New England Divers
3 Haskell St. Beverly Farms 385-R
Prides Crossing, Mass.

Von Lengerke & Antoine
9 North Wabash Ave.
Chicago 2, Ill.

White's Skin Diver Supply Co.
7970 "G" St.
Dexter, Michigan

Michigan Diver's
Equipment & Salvage Co.
688 Sandy Beach
Clarklake, Michigan

CameraCraft Shop, Inc.
515 Essex St.
Lawrence, Mass.

Iver Johnson Sporting Goods Co.
304 Main St.
Worcester 8, Mass.

Lewis Marine Salvage Co.
Main Street
Chatham, Mass.

C. & M. Caron
"La Belle France"
St. Thomas
U.S. Virgin Islands

Hobbyland Sport Center, Inc.
1500 Ave. Ponce de Leon
Shop 22
Santurce, Puerto Rico

Smith Battery & Auto Electric Co.
10125 105th St.
Edmonton, Alberta, Canada

William F. Sigal Sporting Equip.
564 University Ave.
Palo Alto, Calif.



FACTORY ADDRESS

HOPE - PAGE ENGINEERING CORP.

P. O. Box 6541
LONG BEACH 15, CALIF.

JOBBER AND DEALERS INQUIRIES WELCOME



Autobiography of a Skin Diver

(By request of The SKIN DIVER Magazine)

By ANTONIO E. CRESSI

I belong to a family of sporting people, some members of which have attained flattering successes in the sports in which they have taken interest. As I was born in a city on the sea, my passion for water sports took root in me since I was a child. My mother remembers having uselessly waited for me some evenings. I would spend all my spare moments on the beach, whenever I got a chance I would hop on a fishing boat and preferred to spend the night uncomfortably with the men waiting for the moment of pulling up the nets, rather than sleep comfortably in my bed. I am unable to say with precision when I started swimming under water because since I was a baby I loved staying under water as long as I could and I had no rivals on the Ligurian coast who could beat me in depth matches; i.e. distance and endurance under water. My passion for the sea bottom prompted my idea of a goggle enabling me to attain a good visibility under water; in 1938 I succeeded in making one which was very good. Made of metal with rubber packing to render it waterproof and to have it adhere to my face.

In the meantime the importation of the first "Monogoggle" from France started and I progressed in realizing another goggle, made with a section of an auto inner tube. I called this mask "Sirena", though it was very rudimentary, it enabled me to carry out some good immersions, without the troubles caused to me by the "Monogoggle". In this way it was possible for me to have a nitid vision of the bottom and to observe all the movements of its dwellers; the first step toward underwater fishing had been accomplished: the gun which followed was a logical consequence! This first tool of mine was

CRESSI, veteran man of the sea, as pictured in 1948.

very simple, but it responded perfectly to my purpose and I soon was able to make havoc of fish, as nobody had yet ensnared such game with such an arm.

Though I tried to keep my new pastime a secret (I had not yet thought of a commercial exploitation) the news on my fishing bags soon started to divulge. Thus, in order to do my friends a favor at first, and then having the intuition that the new sport would soon meet with general favor, I gradually commenced the manufacturing of all pieces of equipment for underwater fishing which bear my name.

My commercial activity has not blurred my passion for fishing and I spend every free moment equipped with fins, mask and a gun scouting some limpid bottom. In my plant where we make masks of all types and for all requirements, "Sirena" masks are still made. They are naturally improved in many ways, but they still have the characteristics of the first one which marked the start of all my activity.

Of course my usual fishing grounds are the coasts along the Ligurian Sea and particularly



the Portofino Promontory. Here I caught my biggest prey: a 25-kilo cernier, which is a coveted prey in our seas! However, as a fisherman, I know also a great part of the Mediterranean: all the Italian coasts including the islands; Greece, Yugoslavia, Corsica, the Balearic Isles and the coasts of Spain. I also know the Lybian Coasts, which I consider the richest fishing zone among all those I have tried. Useless to say that I always go fishing with Cressi equipment and that I am fully satisfied.

In my fishing I often use the Oxygen Autorespirator without any preference for either of the two systems. In fact, in spearfishing, controlling one's breath is a great personal satisfaction, while with the Autorespirator fishing acquires a more scientific character, not less interesting.

It is difficult to say who is the best fisherman I have known. Certainly it is not the one who has the good luck to catch the biggest game in the world, but the one who is able to fish without autorespirator on sea bottoms at a depth of more than 20 meters and possessing precision in aiming and a rapid intuition in any circum-



ANTONIO E. CRESSI,
1939. Underwater
spearfishing pioneer is
shown here pinning his
fish to the bottom. Note
the absence of fins.

stances. In Italy I know well the best fishermen's ability. Among the underwater specialists who fish at even more than 30 meters we have Falco, Bucher, Novelli, Stuart and also Catalani, whom I consider one of the best and most perfect underwater fishermen, bearing in mind his requisites as to endurance, precision in his aim, rapidity in his intuition and constant efficiency. In fact in every competition he has always been among the first, whether the contest takes place in shallow waters, or at great depths or in very cold sea. In America one of the best underwater fishermen is certainly Gustav Dalla Valle, competent and knowing well the Caribbean Sea, where he has caught sundry big specimens. I cannot express an opinion on the Brazilian and Venezuelan underwater fishermen whose fishing ground is too rich with game for a comparison with ours.

As to sharks it is known by now that their dangerousness is more imaginary than actual. Undoubtedly those of the most aggressive kind may be dangerous for the bather swimming on the surface, ignoring the danger, but he who is equipped with mask and watches the movements of the shark, going towards it, if desired, will see it flee rapidly.

My most emotionant adventure under water was not an encounter with some aggressive shark or monstrous polypus as fancy might lead to assume, but my entanglement in two thin ropes! I had participated with some friends in a fishing party with auto respirator. One of them had hit at a depth of more than 20 meters a cernier but had been unable to extract it from its cave, in which it had taken refuge. When he felt exhausted he returned to the sur-

face and I dived to try in my turn. I had put on his apparatus, which by now had little oxygen left and I had also taken with me two guns. I applied myself with dogged tenacity in the undertaking, and feeling that the oxygen was almost exhausted I decided to return up. But my attempt to push upwards was useless. Almost as by a malicious witchcraft I felt held back by the cernier in the cave. What had happened? The lines of the arrows with which the cernier had been hit in my last attempt to pull the prey out of the cave, had become entangled to an incredible extent, fixing me in a net. I tried to disentangle myself, but every movement of mine only complicated my situation. I could not even use my knife, as the respirator prevented me from making out how I was tied up. The situation was not an encouraging one. At a depth of 20 meters, laden with the lead belt and the respirator which was now exhausted, I only saw one way out: to rid myself of all the equipment pulling it off from the feet. A minute had already passed without my breathing and in that anguish every instant seemed as long as eternity. With great effort I succeeded in pulling myself out of the equipment and with skill and effort I was able to untie the belt. I arrived at the surface half fainting. Although in 20 years of fishing I have had many adventures, some dangerous ones and some painful ones, too.

Still I have always been able to control the situation with coolness, thanks also to my experience and my physical capacity, but notwithstanding time has now dimmed my memory, I shall never be able to forget the moments of anguish fearing I might remain at the bottom longer . . . than I desired. ▶▶

THE SEA HUNTER

By Chuck Vallance

Down to the sea the diver came,
To hunt the reefs in search of game.
With his stout spear gun in hand,
He swam slowly out from the coral strand.

In renewed wonderment to behold,
He gazed at the strange forms that did unfold.
The courie and the great conch shell
Moved gently with the oceans swell.

Sea fans swayed both to and fro
On the coral ledge of the reef below.
A trigger fish cast a curious eye
At this apparition swimming by,

While deep 'neath the surface of the azure bay
Swam the shadowy form of a giant ray.
At last he spied a movement there,
As a great fish looked from out his lair.

The hunter slowly stalked his prey
In the coral forest beneath the cay;
He pressed the trigger and up from the blue
The bubbles sprang as the shaft sped true.

A flash, a strain, the line drawn tight,
Thus began this undersea fight.
If but one more precious foot be gained
A breath of air could be obtained.

At last his lungs all but to break,
The hunter did the surface make.
Another rush the great fish made,
Then circled back towards his cay.

The battle raged beneath the sea,
For none knew who the victor be.
The diver at last his knife did wield;
Twas then the denizen's fate was sealed.

From out the fish his life's strength flowed,
His rushes short, his movement slowed.
The shadows lengthened with the setting sun
Before the battle had been won.

Back to the beach he towed his prize,
This Grouper of gigantic size.



RANDOLPH GILL, Trinidad, B.W.I.

TUBE-FOOTERS

By LYNWOOD S. SMITH

Pity the poor tube-footer. Unique, odd, they never do anything, poisonous, shellfish destroyers, and uninteresting, are all terms variously applied to starfish and their relatives. Some of these terms are based on fact, some only partly right, and some indicate misinformation. Let's see how they effect you and all the other sea-going creatures.

The group as a whole has certain features which make them unique in the sea. Tube feet are found in no other group for example. A tube foot might be compared to a flexible eye dropper with a suction cup over the end of the hole. It can be extended by squeezing the bulb and retracted by contracting the muscles in the wall of the tube. The efforts of a single tube foot could hardly move a fly, but hundreds of them synchronized are a usable means of getting somewhere. It doesn't get there very fast—not even to the marine version of a fire or to its next meal—but at least there shouldn't be many traffic accidents.

Protection from enemies is important to any animal and especially to echinoderms (starfish and their relatives) since they can't run fast enough to escape much of anything. Most of them, sea cucumbers excepted, have a stiff lime skeleton with spines of various lengths sticking out—good armor and a second characteristic of the group. In fact, the name for the group, echinoderms, literally means spiny skin. In sea urchins the spines are long and set in ball and socket joints so that they can truly bristle like a porcupine. While the spines are not as sharp or barbed like a porcupine's, they break off inside after penetrating and therefore are only slightly less obnoxious. To add insult to injury, some tropical sea urchins have poisonous spines.

A tough problem to solve in the sea is how to beat competitors for food and living space. And it's doubly tough when sitting still. Before very long other things sit down on top and all around, helping themselves to the food supply. Did you ever notice how a mussel bed is rarely just mussels? It also has barnacles

growing on the mussels; sponges in between; worms, shrimp and small fish in, under and around the bed. Starfish come to feed on the mussels, big fish to eat the little fish, and on and on. Similarly on piling or in kelp beds. Everybody wants to get in on a good spot. Every possible niche has some living thing in it. But did you ever see anything growing on top of a starfish or any other echinoderm? No? What's more you probably never will. They have really got this problem licked.

Echinoderms have two ways of discouraging fellow travelers. First, their skin is covered with tiny microscopic hairs which produce water currents to carry away any small larva which would like to settle down. Secondly, they are also amply covered with tiny little jaws on flexible stalks. These grab hold of anything that comes by—either crushing small animals or limiting the damage done by larger animals. These jaws are found on almost all starfish, sand dollars and sea urchins, although most are too small to be seen easily without magnification. But if you don't think such things exist, try placing a hairy part of your hand or arm on top of a starfish for a few seconds. I won't guarantee you'll lose any hair from your arm when you pull away, but you'll know something had a good hold on it.

A fairly obvious feature of most echinoderms is that their bodies are radially symmetrical. You say, "So what? Jellyfish are radially symmetrical, too." The difference is that jellyfish are that way to begin with, but echinoderms go the long way around to get there. All echinoderm larva start out bilaterally symmetrical—having a definite front and back, left and right, top and bottom—but go through a series of complex developments so that they end up radially symmetrical—having only a top and bottom with all sides the same. While this might seem odd at first, it really is an advantage for the low-gearred starfish to be able to meet the challenges of its faster-moving environment equally well from any direction since it moves so slowly.

So far, it seems like starfish and sea urchins are the only spiny-skinned animals, but there are a few others. An easily recognized type are the serpent stars—named thus because of their snakey arms. (Fig. 1) They are also called brittle stars since their arms break off very easily. They won't take any trophies for their speed, but they are faster than most starfish and some are even active enough to swim, flapping their arms in a sort of breaststroke. They are rarely more than six or eight inches across and usually inconspicuous—under rocks, in sand, etc. A similar type are the feather stars or crinoids which have ten featherly arms. (Fig. II) While some feather stars are attached to the bottom by stalks, others flit around quite actively. Most inhabit warm waters although Puget Sound is supposed to have a swimming species. The University of Washington has no valid specimen to prove it though, so any Puget Sound skin diver bringing one in to the University can really put a feather in his hood!

Two forms which require some imagination to see how their body shape could possibly be related to starfish are the urchins and the cucumbers. Urchins being round and cucumbers being tubular bear little resemblance to starfish at first glance. But notice that both urchins and cucumbers have tube feet running from near the mouth up toward the anus in five pairs of rows—comparable to the rows of tube feet on a five-armed starfish. If you raise up the middle top part of a starfish and bend the arms upward to meet it, you get the basic layout of the urchin. (Fig. III) A sand dollar (called sea biscuit and sea cooky also) is an urchin flattened out like a disc. The cucumbers on the other hand got stretched into a tube with mouth and anus at opposite ends. Then they lost their spines and almost all of their skeletons, and now lie on their sides compared to urchins. Since there are so few microscopic plates left of the skeleton and muscles are highly developed, some of the smaller cucumbers in the Orient are dried minus their insides and eaten. If you want to buy some, ask for beche de mer or trepang. Other people strip the four large white muscles out of our giant California sea cucumber and eat them. Urchins are also used for food, the French considering the eggs to be quite a delicacy. Let me know how they taste if you try some.

The most intriguing aspect of these animals is their behavior. Their nervous system is very simple—no brain and nerves scarce—and yet they do some of the wierdest things. They seem to know when certain other animals are around them and other animals know when starfish are

SO-CAL DIVERS CO.

UNDERWATER EQUIPMENT — SALES — SERVICE — PURIFIED AIR SUPPLY & RENTALS
CUSTOM EQUIPMENT TO YOUR DESIGN

... Check This Location ...

12008 So. Vermont

LOS ANGELES 44, CALIF.
Phone PLYmouth 6-2322

STORE HOURS

Sat. 7:00 A.M. to 9:00 P.M.
Sundays and Holidays
7:00 A.M. to 11:00 A.M.

STORE HOURS

Weekdays
10:00 A.M. to 9:00 P.M.
Monday — 5 - 9 P.M.

urchins
at there
type are
called
very eas-
ier their
fish and
lapping
they are
cross and
or clin-
fig. (1)
to the
quite ac-
ough Pu-
ng spe-
has no
any fu-
to he
s how!

gination
sibly be
the su-
umbars
starfish
ins and
near he
airs of
feet on
the mid-
rms up-
t of the
lled ea
in flat-
on the
e with
en they
r skele-
ared to
scopic
les are
cucum-
inside
ask for
le strip
ur giant
Urchins
idering
e know

animals
is very
and yet
ey seem
around
fish are

LS

around. For example a large, many-rayed starfish feeds on sand dollars. Drop one in the middle of a sand dollar bed and come back in half an hour. You will find a clear area for several feet around the starfish where the sand dollars have burrowed down into the sand. The same starfish leaves a bare trail about four feet wide for some distance behind it as it prowls through a bed. And neither animal has eyes which can see the other, and no other species of starfish will cause the reaction. A possible clue to this is found in an experiment. Many starfish have a small worm living peacefully in the groove which houses the tube feet. Two aquariums were set up so that the overflow from each runs into a common trough. The starfish was put into one tank and various other animals into the second. The worm was put into the common outlet and allowed to choose which aquarium it would enter. You try to figure out how it always managed to pick the aquarium which contained its own species of starfish. Sense of smell perhaps?

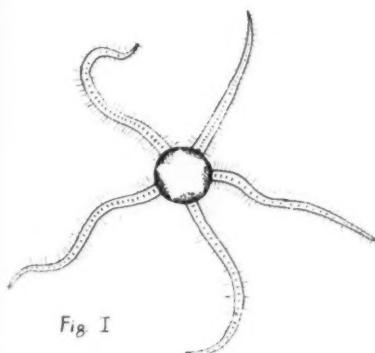


Fig. I

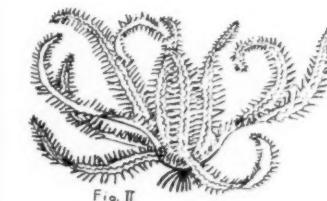
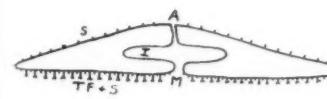
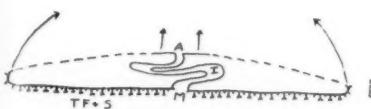


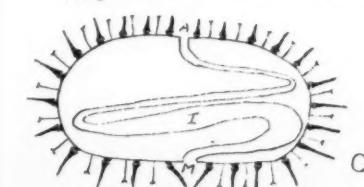
Fig. II



A



B



C

Another starfish is unpopular with its neighbors even though the starfish won't harm the neighbor. This starfish, when placed touching a certain species of sea anemone, causes the sea anemone to let loose of the bottom and swim several feet away in a very un-sea-anemone-like manner. B. O.? Two other starfish are apparently able to stalk their prey even though the starfish can't see them. One supposedly chases scallops along the bottom until the scallop makes a mistake. The other has rather large stalked jaws and catches small fish (blennies) when the fish brushes a fin against the starfish. One such starfish required about a week to catch a blennie when the two were placed in an aquarium. Patience will find a way, so they say, even if you're unpopular.

No one disputes that starfish take their toll of the shellfish population, but there is some dispute as to how they go about it. Textbook theory says that the starfish exerts a slow steady pull by using its tube feet in relays. Then one bright soul, so I heard, recently devised a scale to test starfish's pull and found out that they are really weaklings. So apparently we are still in the dark on this score. After the starfish somehow gets the clam open, it then turns its stomach inside out through its mouth, digests what it can, and then pulls its stomach back inside. No napkin needed this way, maybe.

The regenerative powers of starfish are perhaps their most widely publicized feature. As has been known for some years now, a single arm of a starfish and part of the center can regenerate four new arms if given time and favorable conditions. But for my money, our sand dollar eating friend tops the regeneration list. When strongly stimulated at opposite sides simultaneously, it walked off in opposite directions, pulling itself apart. It must now really have schizophrenia really bad—it split a lot more than its personality.

By now you probably have some ideas of your own as to whether starfish are uninteresting or unique, inactive or sly. What you have read however, is only a small beginning toward knowing the echinoderms. More can be found in books like *Animals Without Backbones* by Buchbaum, or *The Natural History of Marine Animals* by McGuinitie and McGuinitie, or others which your local library or bookstore can suggest. Best of all sources of information, though, is your own observation because seeing is believing. In any case, the next time you are tempted to look down your snorkel at a tube-footer, look a little closer, take some time to watch, and scientific adventure is just around the corner.

ILLUSTRATIONS

Fig. I. A common serpent star. The central disc is small, the arms very flexibly jointed and hairy.

Fig. II. A swimming feather star. The ten arms are really five which branch very close to the base. The zigzag line on the top of each arm is a groove which carries food to the mouth at the top of the central disc.

Fig. III. A possible relationship between starfish and urchin body plans. A, anus. I, intestine. M, mouth. S, spines. TF, tube feet. Note the change in intestine length with change of food from flesh to vegetable types of food. ➤

SPORT DIVING WATER SAFETY COMMITTEE REPORT

This is the first official release, Long Beach Red Cross Sport Diving Safety Committee since the announcement of the accident report program, April 5.

The Committee finds, after receiving 45 accident reports, that the greatest contributing cause for sport diving accidents is lack of swimming skill and knowledge of the ocean.

Specifically, accidents were caused by:

Two much weight used with rubber suits and lack of quick release devices; divers unable to jettison weights is cause in 50 per cent of accidents; Lack of skill in handling paddle boards and other floating equipment, this caused four serious accidents; Lack of knowledge of the proper use of swim fins coupled with poor physical condition resulting in cramps and undue fatigue, this factor was involved in about eight of the accidents; Miscellaneous—wounds and cuts by sharp spears and knives, equipment catching in kelp, inner tubes blowing away, surf, and strong currents; Insufficient knowledge in the use of underwater breathing devices.

This committee recommends that every means possible be taken to urge all skin divers and potential skin divers to become skilled in swimming and to seek knowledge of the ocean. Inasmuch as the Red Cross swimming and lifesaving courses contain most or all of the basic elements required for safe skin diving, that all skin divers be urged to enroll in free Red Cross swimming or lifesaving classes this summer.

The Sport Diving Safety Committee again urges all clubs and all skin divers to report accidents related to skin diving whether injury results or not. After a recent spear fishing contest, only one report was received through the mail. However, a member of the Committee received eight additional accident reports by referring to the records of the lifeguard service. This would indicate a greater need for alertness on the part of all divers so that they may help in this very important program. ➤



"Those moths pick out the darnedest places!"

DIVING and SAFETY

By PAUL CALVERT

A few Sundays ago at Catalina, an eighteen-year-old boy lost his life while diving. As near as can be learned, this boy was trying to see how deep he could dive (without a lung) and may have lost consciousness during his dive. A few days later another boy, this time a fifteen-year-old, lost his life while using a lung. Just exactly how these lives were lost will, of course, never be known for sure. But we can make an educated guess. Needless to say, proper training would have made these boys more cautious . . . and there is the whole point in my writing.

The manufacturers of lung equipment have, for the most part, made their products practically infallible. Naturally, they all emphasize the safety of their breathing units. The man who is after the fast buck in the manufacture of lungs has yet to appear on the market. Much credit is due men who have spent thousands of dollars and endless time in making their products safe. One thing they can't do is to beat some brains into the heads of the potential users of their gear.

Coming at a time when the popularity of skin diving has reached an all time high, The Los Angeles County Department of Parks and Recreation's division of sports have inaugurated a comprehensive course of instruction in skin

and lung diving. I have just completed that course and I believe it is the answer to our problem of educating the new diver as well as the old. I have been diving with lung equipment for two years and by no means consider myself an old timer. However, I was pretty cocky . . . and that seems to be common among skin divers. Let me say, though, that as a result of my taking that course I have not only a new and healthy respect for the dangers of diving, but I also have a brand new confidence in my ability.

Most of you lung divers know that you can remove your mouthpiece, clear it of water and replace it. Most of you know it is possible to clear your face of water . . . but how many of you have tried it? I wonder how many divers know the latest method of giving artificial respiration? How many of you have memorized the most basic of decompression tables? How many of you know that holding your breath to conserve your air is dangerous? Even a rise of two feet with your lungs full of air can cause damage!

I have an eighteen-year-old son who not only considers himself a "flash" in the water, but really is better than the average. It wasn't long ago that I tried to get him to wear a "Mae West" life jacket with his lung. He just gave

a dirty look and ignored me. I think he thought I was insulting his ability to take care of himself. I forgot to say that he is with the Navy, stationed at Terminal Island.

Two weeks ago he started training with the Navy's harbor defense unit's diving team. I saw him the next night. He said to me then, "Pop, you know you should wear a 'Mae West' with your lung." He said, "All the UDT fellows wear them and I intend to from now on." Even the gang I dive with kindly say to me that they don't want to be encumbered with more gear. What they really mean is, "Well, he's kind of old and maybe it's a good idea for the old guys to baby themselves with 'Mae Wests'." I'm waiting until one of them runs out of air about two hundred yards from the boat and when there's a good chop on the water . . . and maybe he can't dump his weight belt. Maybe I'll have a convert or two.

County life guard Bev Morgan, is conducting the skin diving course for the county. Courses are given once a week at Atlantic Pool, 570 S. Atlantic Blvd., East Los Angeles; Mayfair Pool, 5720 Clark Ave., Long Beach; and the Arcadia Los Angeles County Park pool in Arcadia. For information as to times the class is held, call the Los Angeles County Parks and Recreation Dept., Richmond 75511.

Only through education can we hope to cut the annual death toll of skin divers. Here is a real opportunity for newcomer as well as old timer to get the finest of instruction from men whose only aim is to save your life.

Let's spread the word! ▶

NEW! ... Waterlite & FOAM NEOPRENE SUITS IN ATTRACTIVE COLORS

**Light Weight . . . Easy to
Put On and Take Off . . .**

These NEW suits by Waterwear incorporate all the desirable features wanted in any diving suit.

- 4 colors . . . Sea foam Green, Waterwear Blue, Golden Yellow and Ebony.
- Warm . . . even in coldest water.
- Increased strength for longer life.
- Will not deteriorate.
- Corrosion-resistant zippers.



DISTRIBUTED THROUGH:

U. S. DIVERS CORP.
1045 Broxton Avenue
Los Angeles 24, California

BALBOA SWIM SHIRT AND LIDO TRUNKS

Warmth with full freedom of movement . . . Shirt has full side zipper and short zipper for head entry.

Shirt . . . \$29.95 Trunks . . . \$12.50

16 — SEPTEMBER — SKIN DIVER



LA JOLLA SUIT

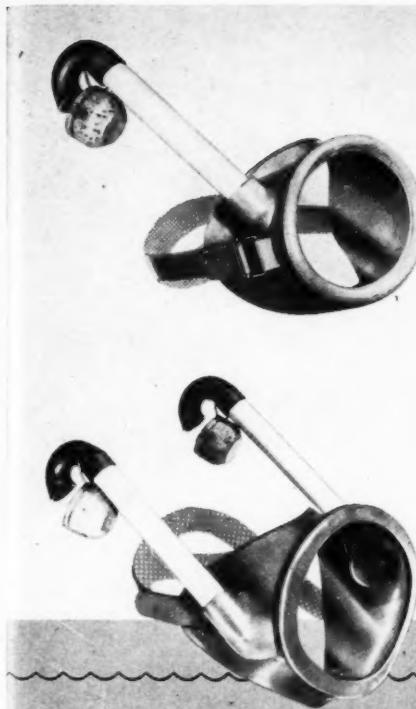
Unsurpassed for diving comfort . . .
Full leg and waist zippers for easy entry.
Suit complete with hood . . . \$89.95

nk he
care
th the

th the
am. I
then,
West'
T fel-
y on."
to me
l with
'Well,
ea for
'Me
n rues
m the
the wa-
weight

ucting
ourses
570 S.
Pool,
Arcadia
a. For
d, call
creation

to eat
re is a
as old
m man



ostrica s-1 Has built-in
snorkel, strong construction
for deep-water use. \$6.95



ostrica Specially
recommended for the
expert skin diver. \$5.75
(*Perla*, a lighter
version, \$4.95)

**"WORLD'S FINEST
UNDERWATER
SPORTS
EQUIPMENT"**

medusa s-2 Ideal for
underwater observation,
etc. \$10.95. With one
snorkel (not illus.) \$9.95

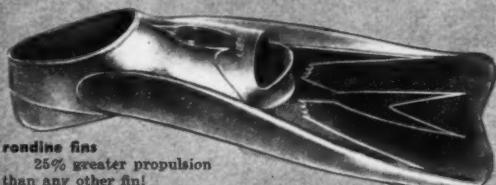
Made in Italy, a complete line of underwater
sports equipment — world-renowned for the quality of
its construction and design. *Cressi spear guns*
and spearheads, *Cressi masks* (featuring 3-ply VIS
Safety Glass), *Rondine fins*, *Carib* and *Capri*
snorkels and other accessories. Write for our large,
fully illustrated catalog.



cornelia sport #500 Spring-powered, most powerful gun of its type \$49.50



torpedine sport #300 Spring-powered, accurate, perfectly balanced \$39.50



rondine fins
25% greater propulsion
than any other fin!
Small, Medium \$10.95
Large, X Large \$11.95



sasette #100 Spring-powered, relatively short, highly maneuverable \$25.00



mignon #200 Only 3 feet long, rubber-powered \$20.50

CRESSI
UNDERWATER SPORTS EQUIPMENT CO.

6210 BERGENLINE AVE., WEST NEW YORK, N. J.

SECOND LORENZ DIVE HALTS AT 293 FEET

By RONALD VANFLEET

On August 1st at 2:30 p.m., Bob Lorenz and his team of divers including Bill Troy, Scotty Dietrich, Frank Bichler, Bob Ferris and Jim Cutting entered the water off Avalon Bay at Catalina Island in an effort to establish a new world free diving record. At 2:30 Lorenz slid beneath the water and started his descent along a weighted $\frac{1}{2}$ " manila rope, marked at 50 ft. intervals. At ten second intervals the rest of the team descended in the order listed above. The team took up their stand by positions in this order: Bill Troy at the 200 ft. level, Scotty Dietrich at 150, Frank Bichler at 100 and Bob Ferris and Jim Cutting at 15 and 10 ft. decompression stages respectively.

At 2:33 an emergency float popped to the surface as a signal that one of the divers was in trouble. Immediately the man tending the light line tied to Lorenz to keep him from straying in the darkness, gave three sharp tugs as a signal for everyone to immediately start for the surface.

Tension gripped the spectators as the signal was given and immediately Ferris and Cutting came to the surface, then Bichler, and finally the man who had the trouble with his regulator, Bill Troy. Upon reaching the 200 ft. level, Troy started having trouble getting enough air and finally he had to give the signal in order

BOB LORENZ, right, is being warmed by a member of the team at one of the decompression levels. Lorenz passed his previous record with a 293-ft. dive. Photo by Ronnie Vanfleet.



to keep from getting into real trouble, therefore calling off any further dives.

Lorenz, who at the time of the signal had reached the 293 ft. mark, was brought up to the 15 ft. level where he decompressed for 15 minutes, then to the 10 ft. level for another 15 minutes and then to the surface.

Upon talking to Lorenz, he stated that "the dive had gone according to schedule until the trouble," that he had felt good in the water and had not felt that he was in danger at any time.

Lorenz, who is 34 years old, plans to try again just as soon as he can line up another boat.

For the dive, Lorenz used a regulator of his own design called the "Water Gill Lung" and a triple tank unit. Some $3\frac{1}{2}$ years ago Bob began to experiment with regulators and came to the conclusion that he could build a regulator on a design that would use less parts and sell for a good deal less than the present units on the market. The "Water Gill" Lung is the result.

The day before, Esther Lorenz, Bob's sister, broke her own record set on the 4th of July, when she dived to 155 feet.

The boat used for the dive was a powerful converted "Crash" boat named "Flamba", owned by Rodger Cunningham and movie star Roy Rogers. These men were very cooperative and did everything they could to make the dive a success.

Speaking of record tries, Bob also came near establishing another record when he speared a giant "sun fish" but couldn't hold it. Your writer saw this fish face to face and it was a monster. I would estimate its weight at well over 300-lbs. ■



DESCO America's greatest name in SPORTS DIVING presents

NEW DESCO Pole Gun

The underwater gun of experts
LIST — \$17.50

NEW DESCO Depth Gauge

LIST — \$3.00

NEW DESCO Underwater Compass

Radium faced LIST — \$12.50

NEW DESCO Spear Pistol

LIST — \$10.00

JOBBER AND DEALER INQUIRIES INVITED

World's Largest Manufacturers of Diving and Water Sports Equipment

DIVING EQUIPMENT
& SUPPLY COMPANY

DESCO

DEPT. S
234 NORTH BROADWAY
MILWAUKEE 2, WISCONSIN



Assisting team divers wrap Lorenz in blanket to keep him warm during decompression. Photos by Ron Vanfleet.

CALIFORNIA

JA JOLLA SKINSTERS
By MIKE CARNOHAN

We wish to congratulate the Dolphins on their winning efforts at Laguna. They really earned everything they got. We know, because we worked like dogs, and still only came up seventh. The committees who handled the whole affair deserve some laurels too, as everything went off very smoothly, except the surf.

There is plenty of activity down here, what with yellowtail and barracuda in the kelp. Frank Leirnaupe has really been giving the yellows a bad time, and new member Al Larsen set what we believe is a new record with a 46½ pounder.

Quite a few record fish are being taken at the Coronados, and not to be outdone, we made a club expedition out there July 25. The water was clear, the weather was fair, the fish were there, but we didn't get any. We saw several, rear view, but couldn't get close enough to connect. We understand that the record went up to 401-lbs. August 8, when Jack Prodonovich snared one that size, so we really have a mark to shoot at when we get out there again.

There was some excitement on our trip. A CO₂ cartridge, touching the exhaust stack, went off with a roar that almost blew Lew Kidd overboard, and the boat did it's best to sink on the return trip, but with the exception of Al Larsen's monster Bat Ray, the trip was otherwise uneventful. We are all looking forward to the next one though, even if it is no more productive, since the islands are such a wonderful place to dive. ➤

CALIFORNIA

SOUTHERN CALIFORNIA MORAYS By BOB BROWN

The Southern California Morays is a recently formed club of skin divers located in the San Fernando Valley.

The club has already been active for the past few months, with excursions to local waters and trips to nearby Mexico. Largest ab taken measured nine and a half inches. In between the times we were hauling up abalone, and blowing salt water out our snorkels, we managed to get a few fish.

Competition is keen between members for the Moray, a trophy awarded to the best skin diver of the month.

We'd like to hear from any unattached skin divers, or anyone that would be interested in learning the sport of skin diving.

A note of interest to all San Fernando Valley clubs. A member suggested an all-valley meet, with a barbecue and skin diving contests.

Our meetings are held on the second and fourth Mondays of the month at Dave Burbank's home, 15004 Dickens St., Sherman Oaks.

We hope to hear from all of you soon. ➤

PHONE EXbrook 6-4266 - 9-4464 - 6-8484

"Water Gill" Products

2547 Lincoln Blvd.
Venice, California

Our air has been tested, purified by filter less than one millionth per gram of foreign matter per 100 cu. ft. by actual test for health's safety. You taste it!

Bay Area Dealers for DOLPHIN Rubber Suits.

Charter Service — Skin Diver - Fishing

Beginners: See Bob Lorenz for advice and expert help.
Romp with Father Neptune and the Mermaids!!

EVERYTHING FOR SPEARFISHING

The Thrilling Year-Around Sport

Visit the fascinating underwater world

CALIFORNIA

**SEA LANCERS
OF SANTA MONICA**
By JOHNNY LOGAN

The Sea Lancers enjoyed two island trips in July. First to Catalina, which proved that 11 divers in a 28-ft. boat is too many, especially in a choppy sea in the afternoon. Bovada's sea bass luck proved normal. Bill Anderson took the trophy with a 6-lb. Calico. Norman Quast of the Oxnard Aqua Explorers invited us on a trip to Anacapa which turned out to be one of the best this summer. Norm is more than a good sport to spend so much time making the trip a success. Several of the fellows saw some fish that gave them quite a thrill and hope to make the trip again. Bill Anderson scored again with a sheepshead.

We were happy to welcome George Kelly aboard at our last meeting. Gene Daniels told us many amusing incidents in the life of "Jet" his octopus that he has raised in his aquarium.

I personally would like to congratulate the Florida Divers in their recent organization activities especially on their stand for conservation. The united protest against the rules of the Nationals Committee is a brave but I'm afraid futile, move, unless they carry more weight than the California clubs. Do you suppose the combined California and Florida clubs could be heard? ➤

CALIFORNIA

**REEF COMBERS
OF BELLFLOWER**

By BOB WICK

We want to congratulate the Sea Cubs on their victory, and also all the other clubs in the Pacific Coast Junior Underwater Championships. It must have been tough going with the water the way it was. We didn't have a team entered this year because we're over the age limit. You guys that go home as soon as the meet is over don't know what you are missing. First thing after the meet the Boys Club of Laguna Beach brings out chowder and later a dance. These guys put in a lot of extra time and effort to help make these meets a big thing and we think they deserve a lot of thanks.

If any of you lung divers don't know as much about your lungs as you should, there are classes held in nearby pools that are just the thing. We have our lung diving members enrolled and we think this is a good thing to add to your club's safety program. This isn't just for beginners, it's for every one who wants to further their knowledge on the use of the lungs. ➤

UNDERWATER SUPPLIES

Artificial Lungs
Rubber Suits
Spear Guns
Air Refills

Snorkels
Frog Feet - Masks
Locker Space
Quick Repairs



Cornelius

PORTABLE AIR COMPRESSORS

NEW**ECONOMY AND
CONVENIENCE**

Cornelius Portable Air Compressors offer skin divers an amazing variety of practical advantages never before provided. Four models now available—all provide light weight, sturdy construction and unusually low operating cost.

Cornelius Air Compressors are powered with heavy-duty AC electric motors or with 2-cycle air-cooled gasoline engines. Pure, clean air at pressures to 3000 PSI and capacities to 2 cubic feet per minute.

WRITE FOR FREE CATALOG!

We will gladly send you complete information

THE CORNELIUS COMPANY

562 - 39th Avenue N.E.
Minneapolis 21, Minnesota



SEA-FARERS on their first club outing. Left to right: Fred Jenkinson, Audrey Emeldi, Stuart Mackay and Carter Collins.

CALIFORNIA

SEA-FARERS

By DAVE GARBELLANO

Over steaks and chicken at Bertola's on July 20th, we finally started the ball rolling on our new Bay Area skin diving club.

It is to be called the Sea-Farers, and has about 25 charter members, mostly affiliated in some way with the University of California. Stuart Mackay was duly elected president, with Dave Garbellano as vice president. Other officers are Fred Jenkinson as secretary and Carter Collins, treasurer.

The club was officially launched on July 25th when we gathered at a beach near Carmel. Stu Mackay came well equipped with suit, lung, flippers and camera, and except for the camera, most of us were similarly outfitted. Neil Porter, who has done a lot of diving around San Diego, was first in the water with his speargun, and was out again on the beach while we were still assembling our gear, having picked up his limit of abs and a sizable fish.

Ours is a mixed group . . . mostly "sight-seeing" divers, with a few real fishermen, and a determined feminine contingent (the Sea-Fairs).

We followed up our highly successful outing with a serious workout at a pool the following week, with our best divers, Mackay and Lynn Stevenson instructing us novices in the important exercises for qualifying as responsible Sea-Farers. Hugh Bradner arrived to pass inspection, and gave us his blessings. We all practiced clearing our masks and diving for lungs until thoroughly

NORTHERN CALIF. SKIN DIVING CONFERENCE

By DICK HARDIE

The third annual Northern California Skin Diving Conference sponsored jointly by the Northern California Skin Divers Club of Vallejo and the Sacramento Skin Divers was held July 24 and 25 at Little River, California. The competition was individual with 51 divers signing up.

A four hour abalone diving contest was held Saturday after which the divers and their friends and families warmed up on abalone

waterlogged, and then voted for weekly meetings at Carmel for all who can show up, to continue practice in more inspiring surroundings.

Each club has features which make it unique. Our claims to distinction are: (1) We intend to enforce the buddy system at all times. (2) In order to become a full-fledged member of the Sea-Farers, a diver must be able to exchange his gear under water with another diver, first in the pool and then in the ocean. (3) Women and children will be welcome to attend all meetings.

We have applied to the Council, and hope to join you on the official club roster before long. Maybe our forthcoming meetings will produce a newsworthy item or two for next month. ▶

chowder (gallons and gallons of it). The ab chowder is a yearly feature and is ably and richly constructed by members of the N. C. S. D. Club. It contains at least fifty large red abalone, many gallons of milk and all the rest of the fixings. An interesting note is that last year Ralph Davis, who helped us gather the ab and clean and pound them, is ALLERGIC to abalone and handled them with gloves or a fork! We all missed Ralph this year.

Saturday night's program featured color and black and white underwater movies taken by Keith W. Cox, Dept. of Fish and Game Marine Biologist in charge of the abalone survey being conducted on our coast. Keith narrated the film and gave a very interesting talk on the abalone and the Dept. survey. The survey is being conducted to determine if abalone are present in large enough numbers to support a commercial fishery.

Incidentally, at the legislature last year the Merridith Fish Co. graciously proposed to help hasten the survey by furnishing diving boats and crews with a Dept. of Fish and Game man on each boat. They would operate in now closed waters, take no more abalone than the boat would carry and report conditions to the Dept. man. Don't laugh divers, it had enough backing to require some fast action by your Council, O. F. P. A. and other representatives! Get behind the Council and the new C. W. F. It'll be a tougher fight next year.

Sunday, July 25 a four hour spearfishing contest was held. Few fish had been seen the day before. They seem to hole up in the rocks when the water gets dirty. The water had cleared over night, however, and a few fish were moving about. First five winners and prizes are listed below:

Ab Contest

Bill Bartlett, Rubber Suit; James Darling, Arbalete; Herman Hatt, Fins; Dale Orr, Mask; Ken Hendrickson, Mask.

Spear Fishing

Dick Hardie, CO2 Gun; Jim Darling, Regulator; Bill McJunkin, Fins; Charley Dent, Mask; Dale Orr, Mask.

There were nineteen prizes in each contest. Largest ab (this area not noted for large ab) 8 29/32". Largest fish 3 lb. 11 1/2 oz. black rockfish (locally called black snapper). This fish was taken with a nine foot slip point hand spear after the point had been lost. ▶

MARES-SPORT FISHING GUNS

The Most Complete Line of Spear Guns in the World

The Finest Material, Construction and Finish

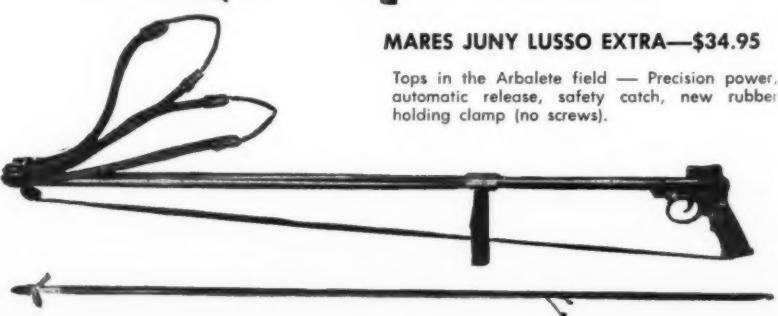
IMPORTED FROM ITALY

**BESS B LUSSO — \$49.95
COMPETITION GUN**



MARES JUNY LUSSO EXTRA—\$34.95

Tops in the Arbalete field — Precision power, automatic release, safety catch, new rubber holding clamp (no screws).



DISTRIBUTED BY

FENJOHN UNDERWATER PHOTO & EQUIP. CO.
90 Cricket Avenue
Ardmore, Penna.

HOFFMAN HARDWARE COMPANY
6625 E. Washington Blvd.
Los Angeles 54, California

D. L. DAVIS COMPANY
3510 Manor Street
Los Angeles 39, California

IMPORTED BY:
LA JOLLA IMPORTS
8361 Paseo del Ocaso
LA JOLLA, CALIF.

The ab
bly and
N. C. S.
red aba
the rest of
last year
abs and
to aba
a fork!

color and
aken by
Marine
y being
the film
abalone
ing con
esent in
mmercial

year he
to help
g boats
me man
in now
han the
s to the
enough
by your
natives!

W. E.

rfishing
een the
e rocks
d clear
sh were
izes are

Darling,
, Mask;

, Regu
Dent,

contest.
(ge abs)
z. black
(). This
nt hand

Y

95
power,
rubber

FIRST

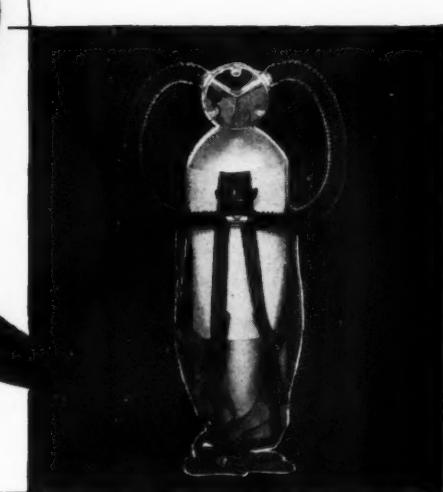
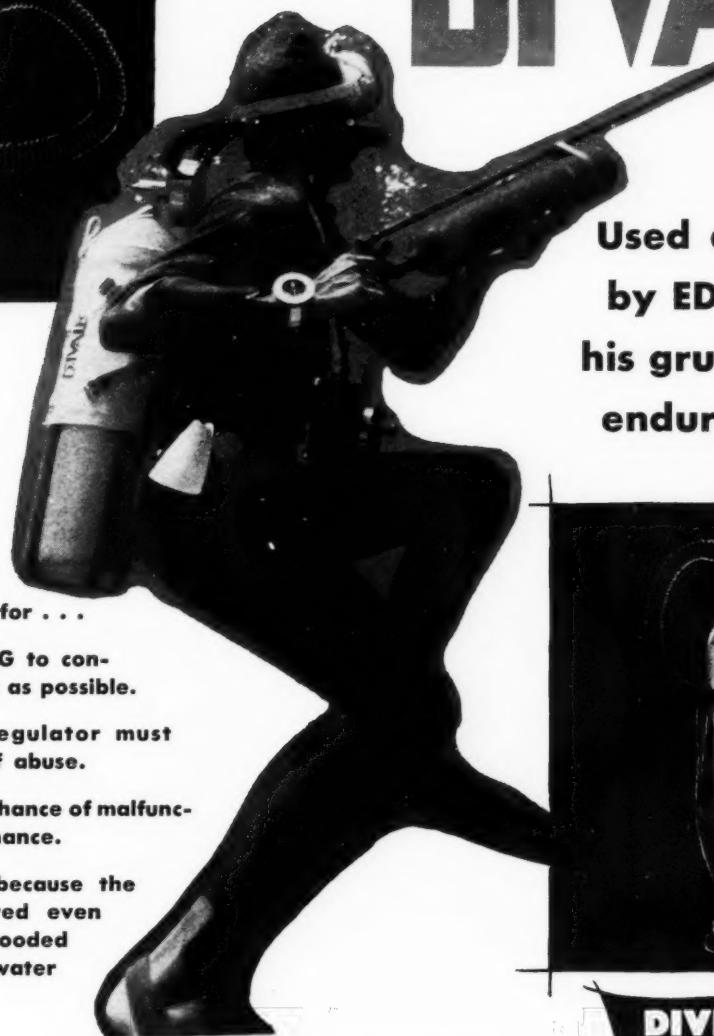
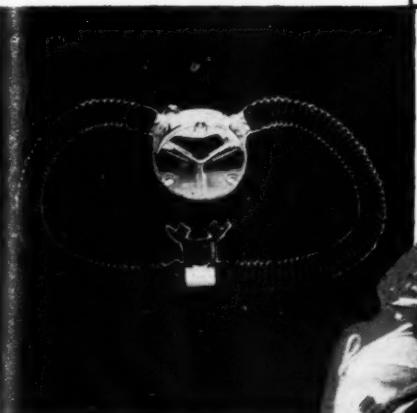
with the

FINEST

DIVAIR

breathe the difference!

Used exclusively
by ED FISHER in
his grueling 24 hr.
endurance dive.



FISHER CHOSE DIVAIR for . . .

EFFORTLESS BREATHING to con
serve as much energy as possible.

RUGGEDNESS, his regulator must
function regardless of abuse.

SIMPLICITY, minimum chance of malfunc
tion and easy maintenance.

EASE OF CLEARING, because the
DIVAIR can be cleared even
though completely flooded
and will not vaporize water
remaining in unit.

DEALER
INQUIRIES
INVITED

\$144.00 COMPLETE WITH TANK
AND HARNESS

\$77.50 REGULATOR ONLY

DIVING
CORP. OF
AMERICA



722 S.W. 8th St., Miami, Fla.



WEST COAST CHAMPIONS—The Dolphins: Chuck Blakeslee, Pat O'Malley and Paul Hoss with their 46-lb., 10-oz. victory smiles soon after the total weights had been figured. Laguna Beach, August 1st, 1954. Pacific Coast Underwater Spearfishing Championships.

PACIFIC COAST UNDERWATER SPEARFISHING CHAMPIONSHIPS

Sponsored by the Laguna Beach Junior Chamber of Commerce in cooperation with the International Underwater Spearfishing Association. Under sanction of AAU. August 1, 1954.

Final Standings:

Total Individual Aggregate — **Pat O'Malley**, 25-lbs., 7-oz.

Largest Individual Catch—**Bob Johnson**, 13-lb., 13-oz. Horn Shark.

Total Club Aggregate Weight:

1st—**Dolphins**, 46-lb., 10-oz., Pat O'Malley, Chuck Blakeslee, Paul Hoss.

2nd—**So. Calif. Skin Divers**, 38-lbs., 6-oz., Chuck Sturgill, Bud Abernathy, Bob Hartley.

3rd—**Muirmen**, 34-lbs., 14-oz.; Dick Jappe, Frank Hops, Bill Wilcox.

4th—**Long Beach Neptunes**, 33-lbs., 8-oz.; Dr. Washbon, Herb Sampson, Lee Jamison.

5th—**Bottom Scratchers**, 28-lbs., 8-oz.; Jim Stewart, Connie Limbaugh, Beau Smith.

6th—**Carpinteria Hell Divers**; C. Sylvester, Dr. Sears, John Hlubb.

7th—**La Jolla Skinsters**; Art Wilkinson, Mike Carnahan, Dan Stevens.

8th—**Snorkels**; Jack Dudley, George Hart, John Jens.

9th—**Sharks**; Chuck Vallance, Roy Young, John Carroll.

10th—**Reef Rogues**; Dave Molthen, John Hanson, Cliff Maas.

11th—**Serpents**; Bill Bue, Ed Gray, Mel Hostetter.

Second place team, Southern California Skin Divers [l. to r.] Bob Hartley, Bud Abernathy and Chuck Sturgill.



DOLPHINS, winning team, receiving trophy from Herb Larson, Velt Rubber Co. Representative.

12th—**Marlins**; Gibby Dear, Roy Wilbur, Ed Barstow.

13th—**Sea Spooks**; Wesley Andrew, Bob Johnson, Bob Stipp.

14th—**Sea Downers**; Bill Hazen, Marty Altman, Dick Hall.

15th—**Nisei Kelptanglers**; Bill Yamachika, Sam Ichikawa, H. Nonokawa.

16th—**Sea Stalkers**; Ross Van Meter, Virgil Wakefield, Bob Sperry.

17—**Sea Combers**; Larry Nelson, Ted Heineman, Bob Sharp.

In addition to all competing clubs, special thanks is given to the Kelptomaniacs, Snorkels, the SKIN DIVER Magazine, Keith Kummerfeld, Ken Kummerfeld, Registrars, and all cooperating organizations and individuals for their help in successfully staging the Pacific Coast Underwater Spearfishing Championships.

National Championships Committee of the I.U.S.A.: Fred Beitz, A.A.U.; Bill Schroeder and

Braven Dyer, Jr., Helms Athletic Foundation; Candida Davis, I.U.S.A.; Owen Churchill, donor; Dr. Paul DeBach, University of California; and Ralph Davis, General Chairman.



MUIRMEN, third place team (Pacific Coast Championships) and Defending National Champions. Left to right, Dick Jappe, Bill Wilcox and Frank Hops.

JAMBOREE CHAIRMAN RELATES APPRECIATION

I want to thank my committee, Bill Barada, President of Council; Woody Dimel, Vice-President, and Homer Lockwood, Public Relations, for their part in helping the Jamboree to keep rolling and doing their part at the mike.

I want to thank Dot Davies for her untiring help and her husband Gene, the indispensable chauffeur, who never says a word but takes Dot to all her meetings. Gene Daniels for his publicity. Johnnie Logan, Legislative Director, Jerry Thomas for the booths and special events. His son for his part as the monster. Dick Taylor, magician. Father Neptune as played by Terry Lewis, the Seaspoons, the Sea Sabers and numerous other people who all helped in the Cleanup Committee. Thanks to those who helped at the Gate. Healthways for their truck for helping people up and down the hill. If I have not mentioned someone it was not my intention. I want to thank Kate Miller, my Co-Chairman for her indispensable help. Also the boys who helped put up signs. Dick Taylor and all his club members and the Dolphins for their help.

It was a tremendous job, I enjoyed every moment of it. But it did have its problems, too numerous to mention. This was my second attempt to put on a show. The Luau and Jamboree.

Our Council of Skin Diving Clubs is becoming too large and important. I did my best but I think we should have professional help to put on our shows in the future. All I can say is I hope everyone enjoyed themselves.

It was disappointing to find Marineland would not be open. Last April we contacted Marineland to see if we could have the Jamboree in August. They were scheduled to open June 15. To the final day of August 15 I had hopes we could go through but they had problems also with strikes, etc. However, be sure and hold your tickets and any time in the future Marineland will honor your tickets after the 28th of August.

Thank you. Laura Sturgill, Chairman.

NATIONAL UNDERWATER SPEARFISHING CHAMPIONSHIPS

To be held August 29, 1954

The results and pictures of this meet will appear in the October SKIN DIVER. The teams expected to enter this regional contest will be from the East Coast Underwater Spearfishing Association; the Florida Skin Divers Association (Tritons, Miami); the Guantanamo Bay Denizens of the Deep, Cuba (U. S. Navy team); the Pacific Coast Championship team (Dolphins); the Central California Champions (Monterey Sea Otters); and the Defending Champions, the Murmen (Calif.).

EAST COAST UNDERWATER SPEARFISHING CHAMPIONSHIPS

The East Coast Underwater Spearfishing Championships, formerly scheduled for August 15th, were held August 22 at the Middle Breakwater, Point Judith, Rhode Island. Detailed report and pictures of this meet will appear in the October issue.

CUDA CUP WINNERS



CUDA CUP CHAMPIONS—Tritons, Miami Beach, Florida. Left to right: Charles Andrews, Art Pinder, Jasper Williams, Don Pinder, Howard Snider and Fred Pinder. The Pinders will represent the TRITONS at the Nationals, August 29th, Key West. Burton McNeely photo.

CENTRAL CALIFORNIA UNDERWATER SPEARFISHING CHAMPIONSHIPS

August 15th, 1954

Four hour contest took place at Fan Shell Beach, 17 Mile Drive, near Pebble Beach, California. The winning team of Roy Hattori, Bob

Moore and Jerry Bastian, MONTEREY PENINSULA SEA OTTERS had a total of 82-lbs., 9-oz. of fish. Bob Moore was presented the trophy for the largest single catch of the contest. Pictures by Dan Toms, Pacific Grove Looney Gooney, of this meet will appear in SKIN DIVER next month.



PACIFIC COAST JUNIOR CHAMPIONS—SEA CUBS: Douglas Rich, Mike Vogel, Tony Smith. Meet was sponsored by the Laguna Beach Boys Club in cooperation with the F.U.S.A.

ST. THOMAS BLUE MANTAS

By LEWIS H. STRAUSS

For the second year we are reporting on the June activities of the St. Thomas Blue Mantas in the Virgin Islands. Instead of giving chronological account of the activities, I would like to confine the remarks this year to a few particular observations of interest to SKIN DIVER readers, all of whom are well aware of how we operate in the briny deep.

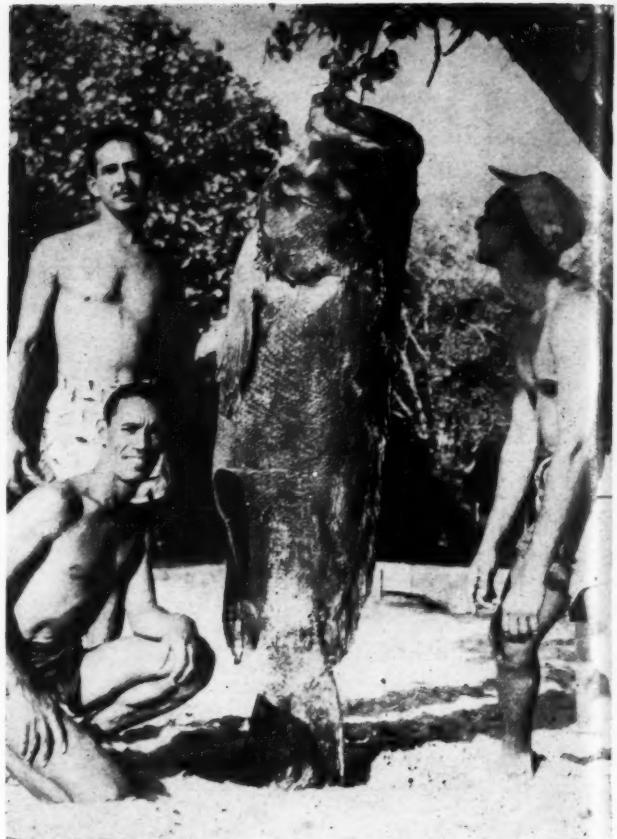
First I would like to say that this year we fished intensively over the whole Virgin Island area using a 42-foot twin screw Hubert Johnson Sport Fisherman, plus a dinghy with an outboard. Most of the time we were out for three day trips, and there were usually five divers in the water. We think that this is a pretty ideal combination—four guns and a camera. The guns were all four strap rubber guns, which we still find the best all around and the camera was a prototype of the Fenjohn Goggler. Good results were obtained with this camera, both in color and black and white and the production model is now available for rental or purchase.

We read many discussions about fishing out an area, but most are confined to regions along a Continental Coast with lots of fishermen, such as out California way. Question: Can a mid ocean group of islands be fished out by a relatively small group of divers? The answer, we regret to report, is definitely yes. We have actually observed the depredations of those who spearfish far beyond their ability to consume them. One single fish and game representative, spearing groupers with religious fervor, can materially reduce the population of these fish over wide areas. This is of course not true with fish that move about a lot such as sharks, tarpon, etc., but definitely applies to reef living species.

How do the suggestions of Dr. Bradner work with respect to cementing lenses for visual correction into face plates? We put a pair in a mask with Canada Balsam and they work fine—we don't really need them, it was curiosity. In the Virgin Islands, at least, the flora is so complex in detail that the diver depends more on movement and color to attract his attention and hence lack of 20-20 vision is not too great a drawback.

Do barracudas swim in schools? Many schools of the smaller types have been seen and photographed. However, this year we saw for the first time full sized Caribbean barracudas schooling. It was apparently mating period or some other special event for none of us had even seen them in groups before, although they are frequently found in pairs or threesomes. The sight of 25 four foot barracudas close by would be quite a shock were it not for the fact that they do not exhibit much interest in the diver when schooling, at least no more than under ordinary conditions. We have seen large barracudas make runs at members of our group but

THREE MEMBERS of the "Blue Mantas" Club of St. Thomas, Virgin Islands, Andrew H. Borne (right) chairman, James Sabino (left, kneeling) secretary, Gerald Nicholson, treasurer, made a fine catch on July 17th in beautiful Magens Bay on the North Coast of St. Thomas—a 258-lb. Jewfish, 6' 4" long. Photo from Claude Caron.



they always shear off upon approaching the out-stretched spear.

We have also enjoyed observing the beautiful and friendly tarpon. The tarpon is almost never taken by line in this area (contrary to the situation along the Florida Coast). Yet he is to be found in great abundance, in majestic groups of six or eight, feeding on fry close to shore. All members seen are exactly the same size and weigh about 40-lbs. each. It would be interesting to know whether these tarpon are ethnically separated from those of Continental Coasts or whether, as I suspect, this represents a particular part of the life cycle of the tarpon, during which he spends a few years far from the tidal rivers in which he spends his younger days.

Another observation of some amusement was that made on a five foot gray shark who, swimming along in line behind a group of six tarpon,

was obviously trying to pass himself off as the seventh member. He showed no interest in attacking the tarpon at all but was perhaps using them as camouflage, in order to get near a less bony meal. If this is the case, it is the first time we have ever observed a shark engaged in such advanced behavior.

There is still lots of excitement left in the oceans which surround the Virgin Islands. A boatload of fish is to be caught any day one makes the effort, and there are plenty of strange sights even for the old-timer. If any well-insured reader finds his fishing getting too tame, I know a nice wild reef where an overboard hat will be struck by a shark before you can say Eugenie Clark Konstantinu. And perhaps we should save that spot for this famous lady, for none of us has dared wet a spear there yet! ▶

SATNESS

Frogman Supplies

6801 W. GRAND AVENUE
CHICAGO 35, ILLINOIS

Aqua-Lungs, Hydro-Lungs, Desco Lungs
All types suits, masks, snorkels, fins, floating
knives, Flotos, Res-Q-Paks
Rubber, gas and spring powered spearguns
Compressors, gas or electric
Books, clean diving air
Catalog 25c - refunded on order
Lung instruction, Safety procedure included
with Aqua-Lung purchases.
Easy pay plan

EXPERIMENTAL TOOLING

RUBBER MOLDED PRODUCTS

TOOLS, DIES AND MOLDS

INVENTORS — IDEA MEN — DESIGNERS
What's new in the way of skin diving equipment? Do you have an idea for a better type of flipper, mask, etc.? If so, let me help you with your particular problem. Whether it is the Development, Manufacturing or the Marketing of a new or old item, see me.

PARK MFG., INC.

2080 LAURA AVE. Jefferson 2178
HUNTINGTON PARK, CALIFORNIA
— Specializing in Molded Rubber Goods —

Cameracraft Shop Inc.

Underwater Cameras and Equipment
Headquarters in New England

Frogman Suits Flippers and Masks
Spears and Spearguns
Underwater Cameras and Housings

Aqua-Lung Repairs for the East Coast

24 Hour Service

Write for Free Catalog

515 ESSEX STREET LAWRENCE, MASS.
Telephone 3-0776

CANAL ZONE

CANAL ZONE SKIN DIVERS

SECOND ANNUAL PANAMA TOURNEY BIG SUCCESS

By MAJOR F. O. CHAPELLE

Although no really big fish were taken and no records broken, the Second Annual Panama Spearfishing Tournament held the first week end in July was a big success. Thirty-one divers were registered for the Tournament, which began at noon Saturday and ended at noon Sunday. Best fish was killed by Bob McIlvaine, whose grouper tipped the scales at exactly 50-lbs. The tourney was held at Taboga Island, 12 miles off the Pacific entrance to the Panama Canal and famous for hundreds of years as a pirate stronghold and resort area. Divers could, however, fish in any of the local waters during the tournament, and most of the fish were taken near the island of Taboguilla, a mile east of Taboga.

Bob McIlvaine's grouper, although not a record, would rank as a good fish in any tournament. Bob is one of the Panama area's most active divers and was the founder and first President of the Canal Zone Skin Divers. The "Abernathy Trophy" went to Norman Fitzgerald for a 26-lb. leopard ray. This was Norm's last time out with the Club as he is an Army man and has been re-assigned Stateside. Other prize winners and their fish are:

Ed Kennedy, largest corbina (8-lbs.)
Jerry Coffey, largest snapper (16-lbs.)
Jerry Coffey, largest jack (13 1/2-lbs.)
Tony Mann, largest grouper (except grand prize) (14-lbs.)

Fred Wells, most unusual fish (moray, sting ray and puffer)

Saturday night most of the divers remained overnight at Taboga and a fine beach party was held, complete with songs, beer, fish and fish stories. With Maj. Chapelle as M.C., the ceremonies included recitations of hard luck stories by the divers. For his tear-jerking tale of "saw snapper — shot — missed — saw huge jewfish — gun unloaded", Bill Mardorf was unanimously voted winner of the "Hard Luck Trophy."

Diving conditions for the tournament were poor. We are now in the height of the rainy season and the frequent torrential rains coupled with heavy squalls and our normal high tides makes it a problem to find water clear enough for diving. During the tournament a boat of some sort was a necessity and this worked a handicap on some, although of the divers registered, only three failed to kill fish. We plan to have our next tournament near the end of the dry season in February or March when diving conditions are generally much better. As a whole, however, the tournament was the best yet and we were all convinced more than ever that divers are a fine group of sportsmen.



SOME OF THE divers who participated in the Second Annual Panama Skin Diving Tournament. In the background is the anchorage of Taboga Island, famous pirate's stronghold of buccaneer days. Photo by Mrs. Owen Bosworth.

**NOW
COMPLETE FREEDOM
AND SAFETY WITH
SCOTT
HYDRO-PAK**

THE FINEST, SELF-CONTAINED UNDERWATER BREATHING EQUIPMENT AVAILABLE

Full, natural rubber face mask provides a completely waterproof seal and the 5 1/2 inch "picture window" safety glass lens permits perfect clear vision.

Air economizer allows you to breathe the surrounding atmosphere when head is out of water. If mask is removed and replaced underwater—the ejector button will again quickly eliminate water from mask. Air cylinder contains 50 cubic feet of compressed AIR with 1/4 tank reserve supply—lasts up to 1 hour continuous use—permits depths to 200 feet. Cylinder valves at bottom for easy access. Harness, cylinder and hose distribution allows full body and arm movement.

Leading the field for over 20 years, Scott has supplied more units for industry—fire fighting—and U. S. Air Force than any other company.



Distributed by

OLYMPIC WHOLESALE

8864 Pico Boulevard

CRESTVIEW 4-2866 RADSHAW 2-7741

HERBIE TOO

40' DIESEL CRUISER

CHARTER ONLY
20 PASSENGERS

"Make reservations for Derby now."

CARL C. DALTON
NEWMARK 1-5433
(Los Angeles, California)

American Diving Supply
1911 South Catalina Street
Redondo Beach, Calif.

Divers Supply Company
1150 Wilmington Blvd.
Wilmington, Calif.

Kerr's Sport Shop
9584 Wilshire Blvd.
Beverly Hills, Calif.

Lyle Hoskin & Sons
913 Coast Highway
Newport Beach, Calif.

Ray & Al's Sporting Goods
290 Broadway
Laguna Beach, Calif.

Vincent's Cyclery
1723 18th Street
Bakersfield, Calif.

Tex's Tennis & Sporting Goods
910 Wilshire Blvd.
Santa Monica, Calif.

Neptune Sports
340 Calle de Andalucia
Hollywood Riviera
Redondo Beach, Calif.

Piety's Sporting Goods
215 Ocean Ave.
Laguna Beach, Calif.

Sportland
406 South Lake Ave.
Pasadena, Calif.

LOUISIANA**DIXIE DIVERS CLUB**

By MRS. R. O. ALBA

WHOOPEEE! What a month this has been. During July quite a few things have happened that are good reasons for shouting. The Louisiana State Legislature passed a bill enabling "skin divers operating for sport in salt water, while submerged into the water and using standard spearfishing equipment" to take fish. The Governor signed the bill and it is now on the books that spearfishing is legal in salt water.

I hope that all divers in our state will appreciate the time, work and effort members of the Louisiana Wild Life & Fisheries Commission, the New Orleans Sportsmen's League and many Dixie Divers put behind this accomplishment. At the present time two more clubs are being organized. One in Baton Rouge, and the other in Lake Charles.

Our members have been busy getting at least one boatload out each Sunday. Dick Alba set a new Jack Crevalle record for the Club. He landed two Jacks weighing 22-lbs. and 27 1/4-lbs. respectively.

Another triumph really can be credited to Dixie Divers J. H. Bonck, Jr., Roland Riviere and Roy Smith. These fellows competed in the annual Grand Isle Tarpon Rodeo, a traditional rod and reel affair. The Rodeo is a fishing contest which lasts 3 1/2 days with hundreds of prizes being given away. This year nearly 3000 people entered the competition. Divers were allowed to enter and compete in the Jewfish, Manta Ray and Shark classes. For the first time in Rodeo history three persons were allowed to enter a single fish. After landing two large fish (over 150-lbs.) the three divers finally convinced the rules committee that a team of three divers was necessary in landing fish this size in these water conditions. FROM NOW ON THIS RULING STANDS. Divers must realize the tremendous advantage they can thank the trio for. Incidentally, they won the Grand Isle Trophy for their 243-lb. Jewfish.

Talk about the irony of fate . . . listen to this. A new Ford is drawn for out of a hat containing the different class winners names. Guess who won the car??? A guy who landed the only Dolphin in the entire 3 1/2 days. The fish weighed T-W-O pounds. Need I say more? How's that for a fish story? ☺

WASHINGTON**BEACHCOMBERS**

By JOHN E. FRIARS

One of the highlights of the month's activity here was, of course, the National Gold Cup Races held on Lake Washington August 2nd through 7th. At the request of the Gold Cup Committee, the Beachcombers provided standby rescue crews for each day of the time trials during the week, and on Saturday, the day of the race. Divers Jack Carton and Ralph Seeley were featured during the week on a live telecast direct from the pits where they were interviewed in the water. Jack and Ralph even managed to



DICK ALBA, Dixie Divers Club, 27 1/4 and 22-lb. Jack Crevalle speared off Grand Isle, Louisiana.

make things interesting for the TV cameras by diving for a hammer lost by one of the racing boat mechanics. Ralph was successful in finding it and bringing it up for the edification of all TV viewers. On Thursday of the time trials Morris Mikkelsen and Bob Carroll were photographed and interviewed for an article in the Seattle Times. Fortunately, during both the time trials and the race, no serious accidents occurred and it was not necessary to do any rescue diving, making the affair an enjoyable outing with a good closeup view for all concerned.

The August club meeting was held outdoors at Lincoln Park in West Seattle, where meeting activity was carried on by lantern light. A special demonstration was held of all popular makes of spearguns. Coffee and cinnamon rolls served hot off the Coleman stove by the ever faithful wives, climaxed the pleasant evening.

Several enjoyable diving trips have been made this month to various water areas in Western Washington. Probably the most beautiful underwater scenery was found beneath the ferry dock at Harper, Washington (middle Puget Sound). Off the outer end of the dock, ranging from 25 to 45 feet deep are hundreds of old broken piling lying in a hedge-podge maze, lined with brilliant white, orange and purple anemones, plumed with sargasso weed and kelp, and alive with fish of all sizes. Several times the divers enjoyed that peculiar sensation of diving through a particularly heavy school of small fish, turning over on their back and looking up to see nothing but a solid wall of wiggling, silvery bodies between them and the surface. Rock Cod and Cabezone to 20-lbs. were taken. ☺



JOHNNY BONCK and ROLAND RIVIERE, JR. examining their Tarpon (150 and 200-lbs.). Grand Isle Tarpon Rodeo.



La Jolla Sporting Goods
WALL ST. AT HERSCHEL

SKIN DIVERS HEADQUARTERS
for San Diego County

SPORTSGEAR FOR LAND & SEA

AQUA-LUNG SALES - SERVICE - REFILLS & INSTRUCTION

KENCO
Balsa & Fibreglass Surfboards

RUBBER SUITS • MASKS • FINS • GUNS

LA JOLLA, CALIFORNIA
BILL TOWLE Glencourt 4-3607
"Home of the La Jolla Skinsters"

DO IT YOURSELF**Underwater Camera****Box Castings**Waterproofed
(Impregnated)

4 1/3 or 5 1/3 inside dim.

Box may be adapted for your own camera—
Reflex, Miniature or Motion Picture**Ace Lab**10364 STATE STREET
LYNWOOD, CALIFORNIA

cameras by the racing in finding of all the trials are photo- cile in the time has occurred rescue diving with.

outdoors the meeting light. A popular salmon rolls the ever evening.

ave been areas in beautiful beneath the Middle Puget, ranging hundreds of old age more, sand purple and kelp, several times a station of school of and look- all of w- and the lbs. were

CALIFORNIA

DAVEY JONES RAIDERS

by di carlo

Raising the initiation fees hasn't stopped the prospective members from joining up with the D. J. R.'s Inc. It's the constant action of the Raiders that keep the divers interested. At least every other weekend the Raiders cut out for Catalina. Our boat is really something to see with all the gear hanging from the railing when Art Fisher isn't doing likewise, and the long underwear from the flying deck.

We usually head for the other side of the island where our luck has been considerably better. Two a.m. is sort of early but that's the hour we hit the deck and make for the fishing grounds. The morning is filled with diving. Then before we start for home everyone takes a swim.

The first one who dives from the flying deck is brave, in more than one way . . . everyone on the boat dives in after him and he's bombarded.

On the weeks that the Raiders are too poor to go to Catalina (gas is expensive on a big boat . . . they take to the cliffs down around Laguna and Crystal Cove. There have been a few trips to the outer breakwater for scallops and around Palos Verdes stopping at some of those hard to get to coves . . . (this is with the boat, of course!)

Plans for another club dance are in process. Sure hope you all come! Will know more about it in the distant future . . . which of course is much ahead . . . now let's look back to the past while we're in the present . . . all kidding aside . . . while looking back it was our last dance that helped pay for our boat. It's much work getting a shindig up like that but it really is worth it when you see how the club works together. It's really surprising how many divers can get things for wholesale or know where they can get things for nothing!

Speaking of working together, it's great to see everyone showing up on work day on the boat . . . painting, pounding and putting holes in the bottom. (There are those members who do not as yet know how to work the bilge pump . . . it CAN pump water in as well as out . . . we have discovered!)

Last time the boat went out we even allowed a couple of our "pops" to come along and bring their fishing poles . . . and if that isn't working together . . . I don't know what is! ☺

SKIN DIVING DERBY

September thru
October, 1954

All of California
from Oregon border to Mexico,
including Coronado Islands

Buy tickets from any
Council of Diving Clubs Member
\$1.25

Swimming's more fun

Protect your eyes and nose — see where you're going — and explore the underwater wonder world with this imported Mediterranean swim mask! Softest, strongest rubber seals 100% watertight to face. Extra wide, clear vision. Only \$3.95. ☐
NEW Skin Divers' complete catalogue—magazine showing imported & U. S. snorkels, guns, Aqua-lungs, fins, knives, and other diving gear. 25c. ☐
Imported swim gloves \$2.50 ☐ Imported Depth Gages \$1.95 ☐ Sleek rubber trunks \$4.95 ☐

Check your order and enclose cash ☐
check ☐ money order ☐, (ppd.) or c.o.d. ☐
Send to Aquafun, Davenport 4, Iowa, today!

with AQUAFUN!

CALIFORNIA

SEA CUBS

PACIFIC COAST JUNIOR CHAMPIONS

By DOUGLAS RICH

A group of boys became interested in diving and got together to form the Sea Cubs. Under the guidance of John Riffe, we progressed in the sport. The president of the club is Jay Riffe, the vice-president is Mike Vogel, the secretary is Doug Rich, and the members include Hasting Arnold and Tony Smith. We have had a couple of outings to Catalina and have done some diving along the Malibu shores this past year.

The following is a brief report from our contestants in the '54 Junior Championships at Laguna Beach.

Mike — "It was a beautiful day but the water was rough. For the first 100 yards out you couldn't see the end of your spear. At the first kelp bed the water cleared up a little. I explored the bottom and the rocks for awhile without a sign of fish. As I moved a little bit farther out, the water kept getting clearer until it was "only muddy". I kept moving out toward a series of small rocks that jutted above the sea. It was pretty shallow here, and there were fish. After about ten minutes I had five of my total catch. Most of my time was spent at the farthest reef where I speared the rest of my fish, which included a few grunion, and, believe me, I was tickled to see even these!"

Tony — "I thought the water was exceptionally murky, and, although we stayed out the full time, it was very cold. We all seemed a little sick at one time or another during the meet. I thought the meet was very well officiated."

Yours Truly — "No doubt you've all heard the fisherman's story about the one that got away, so I'll just say I'm very happy to be a member of the winning team."

The whole club wishes to thank all the Vogels for their swell hospitality. We also wish to thank the Boys' Club of Laguna Beach, the I.U.S.A., the Helms Athletic Foundation, the A.A.U., and all the officials and life guards for what they're doing for spearfishing, and a job well done.

Please address all correspondence to the club to: SEA CUBS, c/o Douglas Rich, 5737 Eileen Avenue, Los Angeles 43, California. ☺

NEW YORK

LONG ISLAND DOLPHINS

By THE SNORKEL SNOOPER

It has been voted unanimously to incorporate the club. The incorporation of the club is a move to protect the individual members and to provide other benefits to the organization. As an example of the protection provided for the members: any debts incurred by the incorporated club cannot be collected by suing individuals in the club. A committee, composed of Don Byrne, Erwin Ernst, Norman Schiff, Roy Keiser and George Knobloch was appointed (and approved by the members) to decide on a board of directors. These directors will hold office until the next annual meeting.

Guest speakers for the evening were Chief Petty Officers Roland Bruning (who wants to join the club), and John Schmedling, both of the Naval School of Salvage Diving at Bayonne, N. J. They showed a training film on the use of a diving rig and some of the dangers involved. They then spent the rest of the evening answering questions. These questions centered mainly on free diving gear and maximum depths attainable. Emphasis was placed, by both Roland and John, on the dangers involved in diving.

Although, they said, "the bends" (Caisson's Disease) is the most publicized of the dangers, air embolism actually takes the greatest toll of divers' lives. An air embolism occurs when a diver who has been using apparatus at any depth ascends too fast and does not give the air in his lungs a chance to escape. A bubble of AIR enters the bloodstream from the lungs and goes to either the heart or the brain, causing death. John said that most of the deaths attributed to drowning while using a diving gear are actually due to air embolisms, which, in turn, are due to ignorance and a "know-it-all" attitude on the part of the diver.

For those who have oxygen rebreathing units, the Navy sets a limit of 35 feet on the depth at which pure (99%) oxygen can be used, and at 60 feet, pure oxygen under pressure become a poison. As John said: "If you plan to go deeper, have them take your measurements ahead of time." ☺

MEL'S

Aqua Shop

1911 So. Catalina Ave.
Redondo Beach, Calif.

Phone

FRontier 5-6714 or 5-6327

- CORNELIUS PORTABLE COMPRESSORS
- DESCO LINE
- HOPE-PAGE NON-RETURN VALVE
FOR AQUA-LUNG
- SCOTT HYDRO-PAK
- SPRING GUNS - CO₂ GUNS

WE RENT - - -

★ AQUA-LUNGS	★ MASKS
★ SPARE TANKS	★ SNORKELS
★ ARBALETES	★ SWIMSUITS
★ FINS	

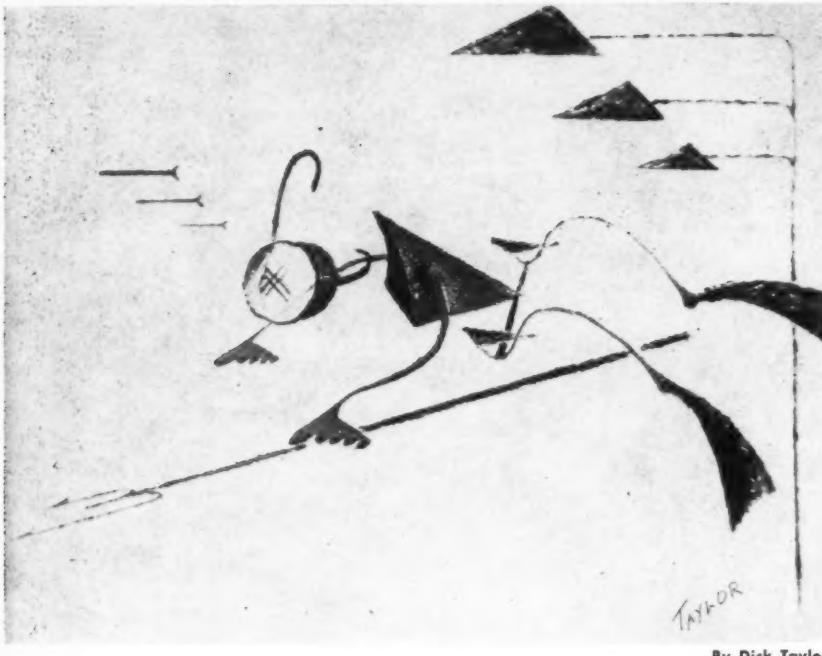
STORE HOURS:

10 to 6 Mon. thru Sat.
(Open Fri. till 8)
9:30 to 12:30 Sundays



And that darned big fish got away with my "Pee Wee"!

Expert Pool Instruction
On Use of Aqua-Lung



By Dick Taylor

BOOK REVIEW

Treasure-Diving Holidays

By JANE AND BARNEY CRILE

The Viking Press

Barney and Jane Crile are both Cleveland-born and bred, and still live there. Barney, in his non-underwater role, is a well-known surgeon (Dr. George Crile, Jr.), attached to the Cleveland Clinic. Jane Crile, a graduate of Smith College (1931), used to be an enthusiastic amateur flier but gave it up after her marriage for the cozier pastime of prowling the deep. With their four children they pursue their skin diving hobby during vacations.

This is the story of one family's experiences in the exciting sport of exploring beneath the surface of the sea. From Jane and Barney's first adventures with a home-designed diving helmet of the most murderous characteristics,

the story moves through a succession of vivid scenes and absorbing incidents, to the days when they and the children—Ann, Joan, Susie and George—felt as much at home in the sea as on dry land.

With just enough technical detail, the authors tell of testing new equipment and of the developing skills that constantly widened their underwater horizons; they tell of searching for abalones and octopuses off the California coast, of spearfishing in Caribbean waters, of finding ivory tusks and 18th-century cannon far below the surface of the Spanish Main, and first-century Greek vases in the Mediterranean. And most rewarding of all are the memories of family holidays spent together in their shared interest in the strange and wonderful creatures of the sea.

Besides being excellent writers, the Criles are superb photographers, and the pictures contained in the book are the cream of their huge collection. *Treasure-Diving Holidays* is a family chronicle for many families to enjoy, for it combines adventure, humor, information, and the thrill of the discovery of a new world. ■

Presenting - - - "PEE WEE"



\$9.95

- Gun Length, 10 1/2 Inches.
- Spear Length, 35 Inches.
- Powered with Surgical Tubing.
- Equipped with Safety.
- Gross Weight, 1 1/4 Pounds.
- Rubber Container for Nylon Line.
- Adjustable Power.
- Maximum 30 Feet Underwater.

A GUN DESIGNED FOR THE BEGINNER & EXPERT

AMERICAN DIVING SUPPLIES

1911 S. Catalina Ave., Redondo Beach, Calif.

Australian Powder Gun

By DAVE FORDHAM

The following information is offered with some diffidence as it may be a prime example of teaching fish to swim. Several of our club members have constructed "black powder" guns using various types of rifle actions, perhaps the best of these is one constructed by Ron Marles.

Ron's gun commenced its life as a .38-56 calibre single shot, (hammer action) Winchester - the heavy weight target barrel was unscrewed, breech thread re-cut and a .303 British Army Service barrel with the rifling reamed out to .002 over spear diameter installed.

The action and barrel were heavily cadmium plated and both stock and fore-end enlarged to give greater buoyancy, then given several coats of spar varnish.

A standard .303 shell and primer loaded with 15-25 grains of Curtis and Harvey "F" powder is used. The usual load is 18 grains of powder, which gives an operating pressure well below the normal above-water operating pressures of 45,000 lbs. per square inch. Since the barrel has a test pressure of 100,000 lbs. per square inch there is an ample safety factor. The shell is loaded normally as a blank with two $\frac{1}{4}$ " cork wads plugged over the powder — both wads and primer being sealed with a coat of clear lacquer.

The spear is a 3'6" length of $\frac{3}{8}$ " stainless steel rod friction fitted at the muzzle to prevent the shaft sliding out, a 3'6" length of heavy steel cable is attached to the shaft just behind the warhead and thence to a line slide or runner (since there are no extrusions on the spear shaft the cable is necessary to take the initial strain and also to allow the spear line to trail from the rear of the shaft.) About 15 feet of spear line is run from the line runner and around a lightly spring loaded holder or trigger and a clip on the fore-end. The remainder of the line is held on a casting reel which gives satisfactory dismissal of the line.

There is practically nil concussion, and recoil though heavy is not painful. The gun with 18 grain load gives fully accurate flight and a killing impact at between 2 and 3 times normal spring gun range—killing range of our spring guns is approximately 12 ft.

Several guns have been made using bolt actions but this type of action has proved unreliable, and though experimented with, were discarded in favor of hammer action.

Incidentally if anyone (attention Rodney Jonklaas) would care to try it out Ron says they can borrow it for six months or so if they care to pay freight to and from. ■

(Ed. Note: Check your local fish and game regulations before building or attempting to use this type of speargun.)

FIRST AID FOR SPEARFISHERMEN

By RODNEY JONKLASS

Unless you are out spearfishing with a doctor in the party, do not be too sure that a few minor accidents will come your way. It is easier on the mind, and on the body to have a first-aid kit ready for use in an emergency. True, spearfishing is not a dangerous sport in most parts of the world, but accidents can happen—

Before considering first-aid kits, check on your equipment and see that it is safe and will not cause injury if handled properly. Keep barbs and spear-points well covered until you are actually ready to shoot. NEVER keep your gun loaded unnecessarily (and this means underwater as well as on land), check your line or cable release and see that it will not foul on your hand or fingers when the harpoon is discharged. (This has happened to me on several occasions and the consequences are VERY painful—no kidding.) And take gloves to protect your fingers, preferably long-sleeved ones which will protect your hands as well, up to the elbows. Never mind if you are not going to catch bugs—use gloves and you will not be sorry. In the Tropics, it is painful and harmful not to use them as every fish, almost, has spines, the coral stings and your delicate fingers will inevitably suffer. If you are a pianist of renown, or a keen typist, or a harpist, remember your fingers! They mean a lot to you.

Now for the actual contents of your first-aid kit; try not to overload yourself and your mates with a complete hospital, but stick to essentials at all costs. Better make sure as to the whereabouts of the nearest doctor and hospital

when you go diving to a new spot—just in case.

Your complete first-aid kit should not occupy more space than a cubic foot; compactness, comprehensiveness and efficiency should be the keynote.

Instruments and Appliances

No need to take a complete surgical outfit, just try to pack:

(a) A small forceps—this is useful and often necessary for removal of spines, sea-urchin spines, etc., from under the skin, after sterilization in a bottle of antiseptic, of course.

(b) A small scalpel—necessary for incising wounds made by spines with barbs lodged in the skin; sterilize and use as little as possible. A Sting-ray spine can sometimes be removed quickly and save the victim a lot of suffering, if incised out with a scalpel. Better leave a big job for a doctor.

(c) A small pair of scissors—useful for cutting away damaged skin over a wound, and also for use with dressings.

(d) Small tourniquets — for use when bleeding is rapid, which is always when a wound occurs in sea-water. Remember to wash first in sterile water, then in antiseptic and apply tourniquet for intervals of not more than 20 minutes.

(e) Rubber balloons — for floats, buoys, markers? No, for use as finger-protectors. A cut finger need not keep you out of the water if first dressed and then waterproofed with a strong rubber balloon and then covered with a strong glove. Same thing with a cut toe, which is well-covered with swim-fins.

Dressings, etc.

Bandages—a good selection.

Cotton wool

Adhesive plaster, medicated (waterproof). Band-aid dressings for small cuts.

A small towel.

Drugs, etc.

One bottle antiseptic solution, like Dettol or Flavine dressing.

One bottle sterile (distilled) water.

Potassium permanganate crystals—the standard antidote for fish poisons which gives quick relief when pressed into wounds.

Ammonium hydroxide—gives quick relief from stings and even small cuts received from fish spines. Most fish poisons are acid and are thus neutralized by this alkaline solution. It has been used in the tropics with great success for Portuguese Man-of-War stings and even for stings of the very poisonous Lion fish (Pterois volitans).

Sulphur/Penicillin powder—useful for dusting cleaned wounds.

Sun-burn ointment—depends on how sunny it is and how sensitive your skin is. But quite definitely you will get sunburned even if you are in the water all the time.

Brandy—good stimulant, but do not use too much! Just the thing after a cold swim.

Matches—just in case you need a fire to warm water or to warm yourself. Be sure they are waterproof.

I think this is about the limit for the average spearfisherman who wants to play safe. Increase amounts depending on the number in your party. If a doctor joins then let him bring his box of tricks.

Finally, remember spearfishing and skin diving is safe sport, but do not take chances and always think before you dive, look before you leap and leave nothing to chance where precautions against accidents are concerned. □

THE MARINA

Edco's New Suit For Women

Be comfortable and attractive while swimming and diving in cold water

Made of soft comfortable Foam Neoprene

Short Suit \$35
(Illustrated)

Full Suit \$75

Available at your Dealers or write



E
D
C
O
**ENGINEERING
DEVELOPMENT
CORPORATION**

305 american trust company bldg.
berkeley 4 - california

FROM LA JOLLA TO CAPE COD

It's the EDCO

SUB-MARINER

Soft, Warm
Comfortable

FOAM NEOPRENE

THE SHORTY \$45
(Illustrated)

THE FULL SUIT \$75

DEALERS FROM COAST TO COAST

or write

E
D
C
O
**ENGINEERING
DEVELOPMENT
CORPORATION**

305 american trust company bldg.
berkeley 4 - california



Spearfishing Hot Spot

By STANTON A. WATERMAN

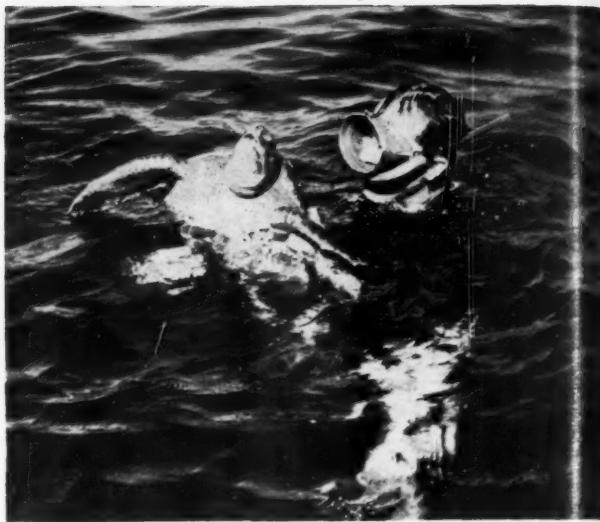
About five miles below the naval base at Coco Solo, Canal Zone, is a tiny section of the Atlantic coast, probably no more than a mile in length. It has everything an eager spearfisherman could want and more.

A fellow navy man, Bob Price, and I discovered it for ourselves during the last war. Bob, a native Californian, was already a veteran spearfisherman and he called this place a real "hot spot". That was 1945. Since then the fin and spear bug has worked on me. I've lost shafts and missed the big ones in such varied places as the coast of Maine, Corsica and the Riviera, Florida, and the Bahamas. This January I revisited our old place with a time lapse of nine years and decided for myself that it was certainly the prize hot spot that Bob

A dirt road ends at a palm fringed shore where an army anti-aircraft gunnery range used to shatter the quiet with its bedlam. A shelf of fringing coral extends about fifty yards out from the shore. It is perhaps two or three feet under water at high tide and well out at low, awash with countless tidal pools. It is also a field of long spined sea urchins, the black unpleasant kind that have tattooed many a skin diver's hide. So it behooves one to walk out with sneakers or at least fins with protective heel flaps.

Now at the edge of the coral shelf awaits a surprise and a thrill that one can never forget. My wife gulped half the ocean in her initial excitement. You slip off the edge, put your face in the water and find that you are at the edge of a sheer cliff that drops to the ocean floor a good 100 to 150 feet below. The cliff side is indented with caves and huge caverns where the coral overhangs. When you dive down to investigate a cave entrance, as likely as not it will turn out to be a long tunnel with sunlight at the far end where it opens into a tidal pool. At least 80 per cent of these tunnels also thrillingly reveal the silhouette of a big grouper or mutton fish etched against the light at the far end. The big fellows will very frequently come toward

JERRY HUTH of Burbank, California, surfacing after an underwater turtle-tussle. Guaymas, Mexico. Photo by Harold O. Hansen.



you to investigate, then turn their broadside for an ideal shot before they go further into the rear.

Bob was once pulled into a hole by a grouper in the 80-lb. class which he ambitiously tackled. We were using home-made hand spears nine years ago, and Bob had the line attached by a loop to his wrist. I remember seeing him whip into the hole after his line, like a dirt puff sucked into a vacuum cleaner. The line fortunately parted and he came bursting out, much the worse for urchin stabs and coral burns.

Though I've never seen a Jew Fish here, I am sure there are some monsters in the deeper holes to which we never reached. With a lung one could have a field day exploring all the way to the bottom. The bottom is gleaming white sand which extends from the base of the cliff out into the deeper green water as far as the eye can see. The water is usually so clear (though storms will leave poor visibility for some days after) that big rays are clearly visible snoozing in the sand on the bottom. Some days they are so thick that a half dozen can be seen in a hundred square foot area.

Barracuda are big there and plentiful. But since you are spearing right by the waters edge, it is not difficult to get your game out of the water and onto the coral shelf. Five foot cudas are not uncommon and they always are sud-

denly there, on the deep side, curious and watchful like a subway strap-hanger sponging on your daily paper. But they're also always well fed and unaggressive unless stimulated by the usual attractions.

Schools of bonito, red and black snappers are frequent. Blue runners (Carangue they call them there) can almost be caught by the tail. The smaller vividly colored fish in addition to magnificent large sheepshead, zebra fish, sun fish, and huge deep blue parrot fish are everywhere. These last are in surprising quantity, for I've only found them occasionally in other waters.

But certainly most exciting are the tarpon. Nowhere have I ever seen such profusion of tarpon while skin diving. To add to the thrill of their appearance, they invariably emerge from the impenetrable haze of a silver cloud of bream. You are frequently among the bream and you first become aware of the big shapes drawing near before you recognize them. The experience is always spine tingling. Then, with the impunity of armored tanks, the tarpon are close about, aloof and unimpressed. Always just out of hands reach, they are none the less so close that their massive scales, powerful jutting jaws and angular fins are in sharp image. To spear one would in itself be easy; to land one if you didn't get it through the head or spine would be doubtful.

One of the last fish we saw before leaving our cliff-side hunting ground on this last trip was a tarpon that must have been grand-daddy of them all; or at least king of his local roost. There were no bream that day and he swam by us in solitary might as if disdaining the company of lesser companions. He certainly disdained us, for he came directly at us as he cruised along the cliff. It was we who moved aside. We estimated his length at between six to six and a half feet, conservatively. Most remarkable, his body was crossed and pitted with scars, either of battle or of coral. We like to think it was battle.

This spearfishing dream, about a mile of it, is no dream at all. It is still there on the Colon coast, waiting for the next diver to slip into its fantastic world. Ask for the old army gunnery range and you can easily locate it. It will take a lot of fishing to diminish the stock there, and I might add, a camera would equip you for the finest hunting of all. ■

The SKIN DIVER Magazine
P. O. Box 128
Lynwood, California

Subscription Blank

\$3.00 — 1 Year

\$5.00 — 2 Years

\$4.00 — Foreign (1 Year)

NAME _____

(NEW RENEWAL)

ADDRESS _____

CITY _____

STATE _____

CLUB OR ASSOCIATION _____

A Magazine for Skin Divers and Underwater Spearfishermen

DERBY PRIZE LIST FOR 1954

COUNCIL OF DIVING CLUBS
352 Smith St., Long Beach, California

The prizes for the 1954 Skin Diving Derby and Jamboree have not been placed in their categories as yet, this will be attended to after the Jamboree, August 15, 1954, but keep in mind that all prizes will be awarded in order of their retail value. Prizes and Donors are as follows:

U. S. DIVERS, one Junior Aqua-Lung and one Arbalette; WATERWEAR CO., one La Jolla Wet Suit and 25 dollars in cash; ROSE MARIE REID, one Glamour Bathing Suit (size 12 only), one ladies' suit and six beach towels; WEFCO CO., one full suit, one hood and mask and one pair rubber socks; BEL-AQUA WATER SPORTS, one full suit; JERRY'S DIVING EQUIPMENT, \$25.00 gift certificate; CATALINA EQUIPMENT CO., one pair "Comet" water skis; THE DANIEL'S PHOTOGRAPHERS, 3 - \$10.00 picture orders; MEL'S AQUA SHOP, \$25.00 gift certificate.

DIVERS SUPPLY, one sport diver lung; KERR'S OF SANTA MONICA, one Brownie holiday underwater camera and case; JANTZEN KNITTING MILLS, two men's bathing suits and two ladies' bathing suits; PANAMCO SALES, Neptune CO2 Gun, and one Arbalette; HOPE-PAGE ENG. CORP., 4-non-return valves; HEALTHWAYS, one P. M. 3 mask, one P. M. 3R mask, 3 pairs W. F. 8N fins, one A. K. 5-OG oval glass lens mask, one A. K. 5-RG RD. glass lens mask, 3- M2G aqua pro mask, one Honolulu swim pipe, one A*3 rubber covered flashlight, 3 Aqua Champ Snorkels and 2 pairs F*2 swim fins; CRESSI PRODUCTS (DONATED BY HEALTHWAYS), one Capri snorkel, one pair Rondine fins, one Torpedine spring gun, one Ostrica S*1 mask.

GLOBE TROTTERS TRAVEL AGENCY, 2 round-trip tickets to Catalina via United Airlines; VOIT RUBBER CO., 6-pair flippers, and 6 face masks; D. L. DAVIS CO., one Albatross spring gun; CHARTER BOAT "MARAY", 10 trips to Catalina @ \$6.00; PRODON-FOOTE SPORTING GOODS, one spinning rod and reel; DOLPHIN MANUFACTURING CO., one rubber suit; TEX'S SPORTING GOODS, one tarpon gun; WYLIES SPORTING GOODS, \$25.00 gift certificate; CHARTER BOAT "HERBIE TOO", Club with most winners gets free charter trip for 20 members; CANOGA CORP., Aqua-Bo; SUIT YOURSELF, Full Suit Kit; PARK MFG. INC., Torpedo Gun; DESCOW, Lung and Pole Gun.

After the first prize is given for the Derby the person who sells the most tickets for the Jamboree and Derby will receive the second most valued prize.



JACK LaBELLE of the Sea Urchins S.G.V., California, and his catch that won him top honors as Diver of the Month for his club.



RAYMOND LAMBERT, conqueror of Mt. Everest, shown receiving air-bag instructions from teacher at the Sub-aquatic Center at Nervi, Genova, Italy, June 1954. Photo by H. Heberlein, Lugano, Switzerland.



KELPTOMANIACS (l-r) Beech Laswell, Russ Storkan and Mike Harrold with Mike's 52-lb. Bat Ray speared off Pt. Dume, California.

Visit Capt. T. A. Hampton Phone 298
British Underwater Centre, Dartmouth,
Devon, England
All types of apparatus available to members.
Diving Boats from 18' to 35' Diesel Cruiser
Aqua-Lungs — P. 40 AIR AND OXYGEN
To members — P. 37-7-6d RECHARGING
MEMBERSHIP — TRAINING — EXPEDITIONS

PESCA SPORT

(Italian Spearfishing Magazine)

One Year Subscription — \$5.00

Manuscripts and photographs from the
U. S. and Canada welcomed.

American Representative:

GUSTAV DALLA VALLE
Old Mill Road
Greenwich, Conn.

DOLPHIN MANUFACTURING CO.

(SKIN DIVING SHOP) MFG'S RUBBER SPEARFISHING SUITS
SUITS ARE DRY TYPE — FRONT ENTRY — HOOD — MOULDED BOOTS

DELUX

PURE GUM

\$42.50

DELUX KELP

If custom built suit desired—head, chest, waist, hips, crotch to floor, foot in inches, wrist, height, & weight required.

DEALER INQUIRIES INVITED — If no dealer in your area write for information.

Open daily till 8:00 P.M. — Sunday till noon

Phone TOrrey 6-2185

BELLFLOWER, CALIFORNIA

9642 EAST ARTESIA BOULEVARD

MANUFACTURING RUBBER FINS

By ARTHUR H. BROWN, *The Spearfisherman*

When you are swimming faster and with less effort because you're wearing fins do you think about the many steps that go into their making? In testing the performance of these clear, lighter than water fins you may be interested in how they came from the rubber tree.

Natural rubber latex is a milky liquid which consists of extremely small particles of rubber suspended in liquid. Latex occurs in the inner bark of the trunk of the rubber tree and is quite separate from the sap. The latex is obtained by cutting through the outer bark. The incision thus made, is diagonal so that the latex, as it exudes from the tree, runs to the lower end of the cut and into a spout from which it drops into a collecting cup. A brisk native can tap two-hundred trees a day, and collects approximately six gallons of latex. Rubber trees are not tapped until they are five to ten years old. Plantations will yield on the average of 500 pounds of rubber per acre per year. In 1940 it was estimated that 9,000,000 acres were planted to rubber trees. The liquid latex thus gathered, contains from 38 to 60 percent rubber, the balance consisting of serum and water.

There are two main types of rubber marketed and used in the world today: 1—smoked sheets and 2—pale crepes. By far the greater percentage of dry rubber is made into smoked sheets since these have the advantage of being stronger, tougher, and the smoke helps preserve the raw rubber during shipment and this rubber is used almost 100% in tire building, foot-sole wear and heavy duty applications. In the making of smoked sheets, the liquid latex is coagulated in a shallow tank by the addition of a weak acid and the agglomeration thus formed, is rolled into flat sheets and hung in a smoke house to dry. After smoke curing these sheets are pressed into bales of approximately 250 pounds. In the case of pale crepe, the liquid latex is first mixed with a bleaching agent, usually sodium bisulphite before coagu-

lation. It is coagulated in much the same way, then washed, dried in the sun, and baled without smoking.

Presently, most rubber comes from Malay and Indonesia. From 1946 through the early part of 1950 we at the factory manufactured and popularized a transparent rubber from Ceylon. This rubber had excellent physical properties and was both stiff enough to make a good fin and still had a transparent quality. Since the Korean action, however, this rubber has been unobtainable in this country, the production of Ceylon now going to Red China and the Russian controlled countries. The bleached pale crepe, which is presently obtainable, does not appear to have the good physical properties required for fins. It is our opinion that fins made from it are too soft to have good water propelling qualities. Meanwhile, we have found that war-developed styrene budadiene re-inforcing agents used in conjunction with smoked sheets are very efficient in the production of the brown opaque fin which is both springy and still stiff enough to be water efficient.

Accordingly, we feel that the old type transparent fin of the pre-war era is passe. We will, however, continue to make the transparent DUCK FEET with the best pale crepe obtainable now, for the less vigorous swimmers.

Now as to the actual manufacture:

As shown in picture #1, all bales of incoming rubber are checked for water damage. Only the best rubber from the most reliable plantations is used in making our fins. Rubber in bale form is known as raw rubber, meaning unvulcanized rubber.

Going back to 1837 Charles Goodyear discovered that raw rubber mixed with about ten percent sulphur held at an elevated temperature for some six hours not only became more resistant to deterioration but if held in a mold under pressure, during this time period,

would assume the shape of the mold cavity and would return to this shape and size after repeated elongation, bending, compression and so on. This chemical change then became known as vulcanization. Adding to the Goodyear discovery, later chemists found that through activators such as zinc-oxide and accelerators, this time of vulcanization might be speeded up to only a few minutes. Spearfisherman fins are vulcanized at 300° F. for twenty minutes as the optimum time temperature "cure".

After the bales of raw rubber are received at the plant and tested for quality, purity and so on, they are chopped in pieces weighing about five pounds each in a bale cutter. The bale cutting knife will force through the raw bale with about thirty-five tons of pressure. It is hydraulically actuated. One of these pieces of chopped rubber is shown in the right hand of the operator in figure #4.

The rubber having been chopped, the next problem is two-fold: 1—getting the "nerve" broken out of the rubber, and 2—getting the curing chemicals mixed thoroughly into the rubber. In order to accomplish this, the chopped pieces are put on the mill. The mill shown in picture #3 consists of two rolls similar to wringer rolls except located horizontally, and having connecting gears of different sizes so that one roll runs faster than the other. The chunks of raw rubber band up on the mill as shown, and since one roll turns faster than the other there is a kneading action at the nip point. The inner-friction of the rubber causes some heating and with the help of special "breakdown" oils, the mill takes the "nerve" out of the rubber making it manageable during processing. The chemicals which help the finished products to resist the action of sun, heat and salt water are added at this time. After the rubber has been "broken down" it is "pigged" off and stored on racks. See fig. #4. The operator is holding a "pig" of rubber in his left hand. For the second part of this operation, the proper amount of pig rubber for a batch together with the curing chemicals is weighed into the square tubs as shown in figure 1 and sent to the mill-room to await mixing. Mixing consists of merely incorporating the "vulcanizing" chemicals into the rubber by putting the rubber back on the mill and adding the chemicals at the nip point. It can readily be seen how this kneading action incorporates the chemical into the rubber mass. The rubber is now ready to be vulcanized and goes from the mill directly into the "injector". SPEARFISHERMAN is the only company using an injector in the manufacture of aquatic rubber goods and while the operation of injecting is simple, it is interesting in that the rubber is "squirted" into the closed mold through $\frac{1}{8}$ " holes under twelve tons per sq. inch pressure. The injection machine is over one story high and the pots and attendant parts are made from heat-resistant chrome moly steel.

At this point, I think that we should correct the fallacy that is common in supposing that rubber is poured into the mold in melted form. Rubber does not melt at all. It will turn sticky and gummy and then burn but will never melt into a liquid form.

This injection process not only knits the rubber molecules tightly together but is the only way in which the deep-rib design may be molded. The mold itself is merely a metal vessel the cavity of which is the size and shape of the outside of the fin incorporating within the cavity a mandrel to hold the rubber out in the area

SKIN DIVERS HEADQUARTERS *in the Heart of the Florida Keys*

seahorse motel

Special Summer rates as low as \$3.50 a couple with private bath
Complete line of diving equipment, compressed air, tackle and boats

Adjacent to 8,000 foot airstrip
Located on Gulf of Mexico

Marathon, Florida

Owned and operated by
Wes and Cal Bartelt

Box 227
Phone 4541

cavity and after re-
sion and
a became
the Good-
ound that
e and ac-
might be
pearfisher-
or twenty
temperature

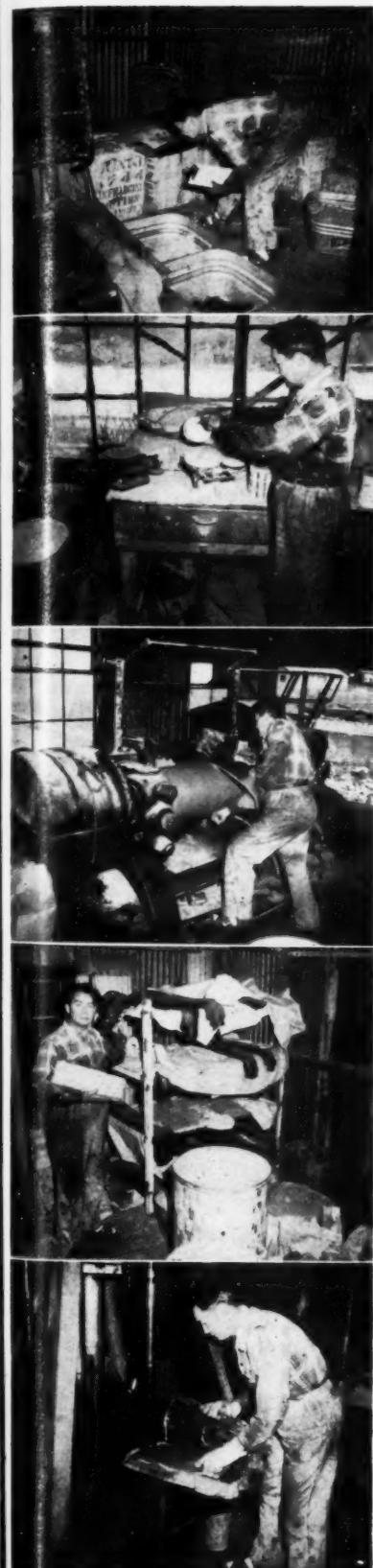
re received
urity and
weighing
atter. The
in the raw
ressure. It
these pieces
ight hand

the next
e "neve"
etting the
into the
the chop-
ill shown
similar to
tally, and
size so
ther. The
the mill as
er than the
at the nip
er causes
of special
e "neve"
le during
up the fin
of sunlight

After the
"pigged"
The oper-
on his left
operation,
or a batch
s weighed
ure 1 and
g. Mixing
"vulcaniz-
utting the
the chemi-
ay be seen
the chemi-
er is now
in the mill
FISHFISHER-
injector in
goods and
mple, it is
"quired" in
oles under
the injection
l the pots
heat-treated

ould correct
osing that
melted form-
turn sticky
melt into

ts the rub-
is the only
y be mold-
vessel the
of the out-
the cavity
n the area



occupied by the foot in the finished product. It is usually made from aluminum, steel or similar. The mold determines the final size and shape of the finished product and consequently its design is highly important. The preliminary steps in the construction of the molds is the design. For this, a pair of fins of every likely size and shape is made of "Korajel" in a temporary plaster mold and tried out in the water. We at the factory, life-guards and several interested swimmers, all try the various designs, sizes and shapes until the most efficient fin is agreed upon.

After tests and trials have shown us the most efficient water design, two blanks of mold metal are machined-out forming a cavity in such a way that one blank becomes the top half of the mold and the other blank the bottom half leaving a "split" line in the middle. The "split" line is where the two molds come together. Another block is machined in such a way that it holds rubber out in the area of the foot, and it is fit in such a way that it will go into position in the closed mold and the air space inside is exactly the size and shape of the finished rubber products. In operation, the mold is then held at a temperature of 300° Fahrenheit, moved into the injecting machine, and filled through $\frac{1}{8}$ " holes bored in the top mold cavity. One of the very important steps in the manufacture of our fins is the "high-stretch" heel strap. While 85% of the rubber is a hard, tough, tight-cure re-enforced rubber, this rubber is not suitable for heel-straps since it has very little elongation. Therefore, before the mold is closed, we insert into the heel-strap area a strip of "mild-cure" rubber which vulcanizes in with the hard-cure web rubber during the vulcanization processes. This then gives us a heel-strap with high elongation which is practically un-breakable and a hard tough web which resists, somewhat, the bending action of the fin in use. This difference of rubbers between the heel-strap and the web is accomplished in the chemical compounding. The heel-strap is compounded for a "mild-cure" whereas the web and rib stock is compounded for a "tight-cure". The combination of these two rubbers then make a practically indestructible product. This also accounts for the fact that the color of the rubber in the heel-strap may be slightly different from the color in the web and rib section.

After injection the molds are held in a press at 300° F. temperature for twenty minutes under seventy-five tons of pressure.

Shown in figure 5 is an open mold ejecting an extra-large giant fin. These weigh over six lbs. a pair. In the extra-stiff rubber used in the fins going to the Underwater Demolition Teams, we compound for an even tighter cure for the web and rib stock and add slightly more styrene budadrene to the mixture. The extra-large giant fins with the extra-stiff rubber are preferred and used by all three Underwater Demolition Teams operating from the Pacific Coast and are highly recommended for the vigorous swimmer where maximum push is essential. The standard fins appeal to the greater percentage of swimmers and divers whereas the transparent fins are somewhat softer and appeal to the less vigorous swimmers.

The SPEARFISHERMAN COMPANY has the only development program of any swimming equipment company and is constantly on the alert for new ideas and is developing now a new swimming device which we hope to have on the market for the 1955 season. ■

ILLINOIS

TIGERS OF THE SEA

By JIM WHITNEY

Club members Rod Norwell, Reggie Laubhan and myself took a two weeks trip to Canada to enjoy some skin diving.

The first week we didn't do much diving because some nasty weather stirred up the water and made it very murky. Later in the week Rod and I salvaged a tackle box, two glass fishing rods, and some bait for two men who tipped over in a canoe.

The second week the weather was clear and warm, and we were in the water every day. A large percentage of our diving was done at a rocky reef we located at the opposite end of the lake. The reef extended out in about 100 yard radius and was from 10 to 15 ft. deep. It then dropped off to about 80 ft. This reef was a paradise full of walleye, bass, northern, perch and suckers, and each afternoon we speared several suckers, the biggest being a 6-lb. fish speared by Reggie. We saw several northern that weighed over 10-lbs., but because of spearing laws we were limited to taking only suckers. The water surrounding the reef was very clear and offered a fine spot for underwater photography, so Rod took advantage of the opportunity and tried his Brownie Holiday for the first time.

The three of us enjoyed the trip very much and considered it a very successful skin diving venture.

Later this month several club members are planning a trip to Lake Geneva, Wisconsin. It is the clearest lake in this area and offers some very excellent skin diving. ■

FENJOHN

Underwater Photo and Equip. Co.
90 Cricket Ave., Ardmore, Penna.



THE HOME OF THE BEST
in underwater cameras

Fenjohn 16mm "Bantam"
Fenjohn #120 & 70mm "Goggler"

Other Top Products
we are proud to handle

The new SCOTT HYDRO-PAK — \$250.00
The ROLLEIMARIN — \$475.00
Mares Spears — \$16.00 up
EDCO foam neoprene Shorty — \$45.00

QUALITY IS OUR BEST SALESMAN

Write for literature

BRITISH COLUMBIA

VANCOUVER BLUE SHARKS

By BOB BUSCOMBE

First of all, Bill Thomson and I would like to thank all the members of the "Sharks Underwater Adventurers" for their hospitality during our recent visit to California. We would particularly like to thank Howard and Joan Gillen of Inglewood—these nice people invited us to stay with them long before we had met them, and we took them up on the invitation and arrived on one days' notice. We soon found out that California skin divers are wonderful people, and we had little trouble finding our way around the popular diving spots.

In spite of the fact that we didn't spear anything very big, we got a tremendous thrill out of the kelp beds and the crystal blue water, neither of which we have in Vancouver. Abalone, lobsters, garabaldi and moray eels were all new to us, and we had a lot of fun getting acquainted with these guys.

On July 25th the Blue Sharks had their first spearfishing contest, in which we used Aqualungs for our deep dives. Bill Thomson won the trophy with 36-lbs. of ling cod, but during the contest he broke his ear drum at a depth of 105 feet which will keep him out of the water for the rest of the summer. Anyone for tennis?

We have been trying some of the popular commercial fishing areas in the gulf islands and had good luck with cod and salmon. The water is fairly clear, and the underwater scenery could compare with any place in the more tropical waters to the south. Our kelp beds are quite different from those in California, and the quantity of fish more plentiful, although we seldom see anything larger than 30 to 40-lbs. Salmon are found more often on the sandy bottom, and in water too deep for skin diving. On a recent excursion to Savary Island and Campbell River I got a 10-lb. salmon, a 15-lb. mud shark and numerous cod. Since there was

VANCOUVER BLUE SHARKS ANNUAL DERBY—L to R, Bob Buscombe, Bert Mona and Bill Thomson. The trophy was won by Bill Thomson who caught seven Ling Cod totaling 36-lbs.



no source of compressed air at these places I got all my fish by skin diving, and found the warm waters of the gulf islands quite pleasant for this sport. One afternoon I discovered myself quite close to a school of Black Fish—a close second to the killer whale in size, and without further ado I beat a fast retreat to my boat.

We have four new members in our club this month bringing the total to 12 active members. Many people are becoming interested in our club in this area, and we are hoping to have our membership well up by next summer.

\$9.95 Swim Shirt
or
Pants Kit

GUM RUBBER SUITS COMPLETE AND EASY TO ASSEMBLE

FULL SUIT KIT FRONT ENTRY WITH BOOTS **\$24.95**

MAKE YOUR OWN SUIT AND SAVE \$\$ AT

Proctor's

6-1768 — Phone — 701-229

128 WEST BROADWAY

LONG BEACH, CALIF.



JERRY HICKEY, member of the Monterey Peninsula Sea Otters, shown holding his first halibut, a 32 pounder. Del Monte Beach, Monterey, California.

For some of the World's best Spearfishing, come to . . .

NASSAU, BAHAMAS

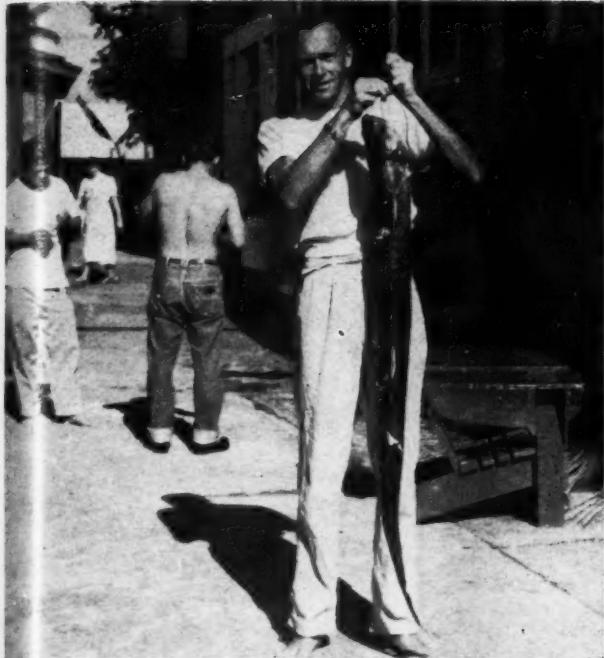
Just one hour from Miami by Pan American, three flights daily, no passports or papers needed.

A full line of underwater equipment for sale or rent, including air and spare tanks at prevailing U.S. prices is obtainable at the —

CLINIC PHARMACY
Elizabeth Avenue, Nassau

For more details re. accommodations, boat rentals, etc., write Airmail (10c) to

P. O. Box 1012 Nassau, Bahamas



BUD BROWNE and a 15-lb. white eel speared at Makapuu, Oahu, T.H. These eels are harmless and very good eating. The natives eagerly took it off Bud's hands after the picture was taken.



LANGSTON PEREIRA, top ranking Reefcomber of Ceylon, walks in 10 minutes before the end of the All-Ceylon Spearfishing Championships to win individual honors with a 30-lb. Mulloway. Contest was February 14th, six hours.

BOTTOM PIC, left column—Muirmen Frank Hops and Dick Jappe, 1953 National Champions, keep in training the year round. They are shown here with a large Bat Ray. Bill Wilcox, third member of the team, is not shown.



MICHIGAN

ANN ARBOR AMPHIBIANS

By Jean M. White

In June we closed charter membership and adopted our constitution. Our club had been operating without one for six months at that time. We elected our officers then, as follows: President, Jerold H. White, 7970 G St., Dexter, Michigan; Vice President, Peter Smith, 811 Mt. Pleasant, Ann Arbor, Michigan; Treasure, Robert Stepp, 11489 Elmdale Dr., Whitmore Lake, Michigan.

The Ann Arbor News is doing a full page on the club and its activities, and this, we hope, will increase membership. Our charter membership is 30 and several have joined since. But there's always room for more. Jerry White bagged a 20-lb. Carp on a hand spear and took a lot of kidding from Bill Bates, Claude Creswell and Pete Smith. Had Jerry been going to Ann Arbor that night Pete Smith would have found the monster strung up to the tree in his front yard. As it happened Jerry and Claude lost it on the way home. That's a good question, "What do you do with these things after you've got them?"

Boyd Werner has just returned from Southern California and enjoyed skin diving in the ocean very much. Dick and Connie Coley are just back from Florida. Dick, while diving off Marathon, had a close brush with a Moray. Talk about Thrills! Jerry White and Claude Caswell leave the 20th of August for seven days of spearfishing in the "Keys".

The club's emblem is a Begoggled, Befinned Beaver. Sharks and the like not being too plentiful in these waters, we thought a beaver would be more appropriate. ☐

Scott HYDRO-PAK

CHECK THESE FEATURES:

- 1 hr. compressed air tank
- Breath thru nose or mouth
- Water ejection button
- Quick lock tank tray
- Full view face mask
- Stainless steel regulator
- No rebreathing
- Demand breathing in any position . . . & many more



In Florida It's

Underwater Sports, Inc.

Formerly Marineland, Inc.

MAKO Camera Cases
Compressed Air

Charter Trips

— SEND FOR FREE LITERATURE —

2219 BISCAYNE BOULEVARD • PHONE 3-7966 • MIAMI 37, FLORIDA

JOHN LOGAN COUNCIL DIVER OF THE MONTH

By GENE DANIELS

This month it is our OFPA and Conservation Director, John Logan. It takes a crusader to handle this most important position and the council is fortunate that Logan has the job. Most SKIN DIVER readers are familiar with the impassioned pleas against purse seiners, short and out of season lobster racketeers, and many other conservation violation reports that have hounded the commercials from these pages.

John is right in his attitude that conservation, tied in with legislation, is the most important reason for the existence of the California Council of Skin Diving Clubs.

The ocean has been Logan's playground all of his life, but skin diving managed to pass him by until just about 3½ years ago. He has, however, been trying real hard to make up for the lost time and inasmuch as he is seldom seen outside of a rubber suit, it seems as though he has succeeded.



John is one of those skin divers who has already reached his all time goal. Each weekend when diving with his fellow club members from the SEA LANCERS (Ex West L.A. Neptunes) he would cruise the kelp gardens of Malibu looking for one really big sheepshead. He was passing them up regularly at 20-25-lbs. for fear that the "big one" would get away. Apparently he finally consummated this ambition but under rather unusual circumstances. After ditching his fellow Sea Lancers with the rather obvious lie about a "trip to the desert", he returned on Monday with a story about his "sheepshead" that went well over 35-lbs. In fact it was so big that he was having the head mounted. The word spread rapidly throughout southland skin diving circles that he had broken the world's record. With bated breath, the Sea Lancers waited to see this awe-inspiring sheepshead. Finally with much pomp and celebration, the unveiling of Sheephead Logan (sorry, Logan's Sheephead) took place. And it was quite a sheepshead, too, a rotten, decayed head of a sheep! THIS he calls humor! (I hate to admit it, but most of this gag was directed at me.)

John's a part time bookkeeper at his machine shop, the Lincoln Aircraft Co., and his full time partner in matrimony has aspirations to be the first female member of the Sea Lancers. Louise is still pumping for the required Abalone and fish and from the looks of things she's going to make it one of these days. And it won't be too much longer before Bonnie and Carol, their two lovely daughters will be applying for membership. And while we are on the subject of the two girls, there is quite

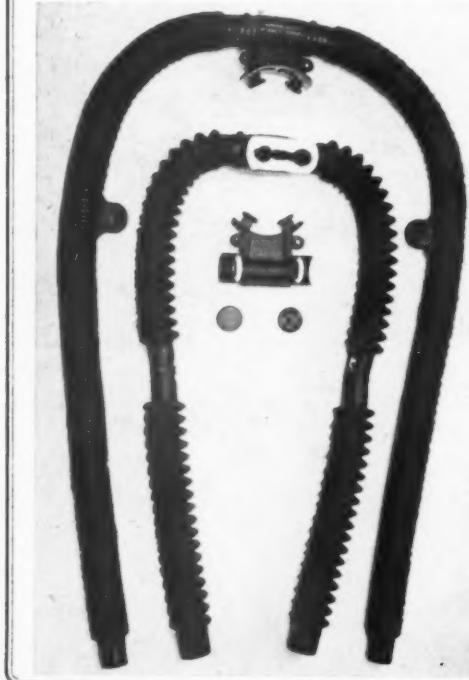
a budding romance on fire between one of them and the son of a certain well known skin diving magnate!

John's position as a director of the OFPA as well as our Diving Council takes an average of about two evenings a week at meetings as well as all the routine work at home. It's wonderful that persons of this calibre can be found to do the jobs that are so necessary to keep all the rest of us divers in the water. The skin divers of California certainly doff their hats to Conservation Director John Logan. ▶



TOP—RICHARD MULHOLLAND, pictured here at Tarpon Springs with what is possibly the largest Barracuda speared in that area, a 40 pounder. Fish was speared while free-diving. Mulholland is from Tampa, Florida. BOTTOM—FRANK OLING, member of the Lockheed Skin Diving Club (Burbank, Calif.). Spotted Eagle Ray, Guaymas, Mexico.

It's
NEW!
It's
SAFE!
It's
LIGHT!



SUPREME DIVERS MOUTHPIECE

(Patent Pending)

- ★ Light weight for extra comfort
- ★ Oversize bite retained for extra safety
- ★ One-piece scientific construction
- ★ Sturdy, light weight rubber
- ★ Built-in non-return clapper valves keeps water from entering regulator mechanism
- ★ Neck band holder clasps for added safety
- ★ Extra check valves keep tubes clear of all impure gases

Mouthpiece Only — \$14.95
With Bellows Tube — \$17.95

POSTAGE PREPAID

Choice of 40" or 58" overall length

LESS \$5.00 TRADE-IN
For your old mouthpiece

Supreme Divers
2036 N. Front St.
Philadelphia 22, Pennsylvania

DEALER AND DISTRIBUTOR
INQUIRIES INVITED

ATTENTION LONG ISLAND SKIN DIVERS

COMPLETE SELECTION

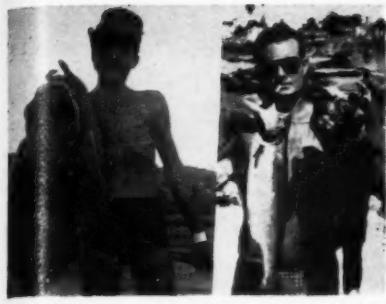
SWIMFINS -- MASKS
GUNS -- SNORKELS
RUBBER SUITS
AQUA LUNG RENTALS

Sales — Refills \$2.50
Salvage work, Underwater Repairs, etc.

**Harbor Marine &
Sport Shop**

Northport, L. I.
Northport 3-2838

one of
own skin
the OFPA
n average
greetings as
ome. It's
re can be
cessary to
ater. The
off their
begin.



CORMORANTS—La Jolla, California. Dave Lind (left) 33-lb Angel Shark, and Art Wilkinson (right) Sheepshead and 4-lb. Salmon.

SAFETY DEVICE ELIMINATES LOSS OF DIRECTION FOR UNDERWATER SWIMMERS

A new, low cost safety device for skin divers and underwater swimmers that eliminates the danger of getting lost under water, has recently been developed by Rodon, Inc. The device, called the LIFEREEL, contains a $\frac{1}{8}$ inch, light-weight, nylon cable stressed for 1000 lbs. in a non-corrosive reel case that can be used in salt or fresh water. The 5 inch diameter reel fastens to the diver's hook belt, replacing the weights ordinarily carried, and as the diver enters the water, he snaps one end of the cable to the mooring or anchor line. Spring tension built into the reel constantly keeps the line taut, eliminating the possibility of snared lines, as the diver swims out and automatically rewinds as the diver swims back along the cable for direction. The LIFEREEL can be locked into position relieving the spring tension if desired. The reel permits the diver to work alone and swim safely within an 80 foot diameter of the anchor line although the working length can be increased to meet the demand. ➤



LIFEREEL

Divers' Bulletin Board

RATES: Personal—\$1.00 minimum or 4c per word. Commercial—8c per word. Payment must accompany copy before deadline date, 10th of month.

SPECIAL INTRODUCTORY OFFER, custom made underwater light cases of durable plexiglass. A must for movies and stills, complete with GE Moscot, \$29.95; or the new Weston D. R. meter, \$34.95, for a limited time only. Immediate delivery. We pay freight, no C.O.D.'s please. Also a complete line of sport diving equipment. Sport Divers Supply, 4407 S.E. Milwaukee Ave., Portland, Oregon.

Deluxe Arbalete spearguns with free extra spear-point, \$24.95 postpaid, was \$35.00; other bargains, send for list. New England Diving Equipment, Box 3C, North Chelmsford, Mass.

For Sale—Desco B Lung. Purchased this season. Excellent condition, used only a few times. With spare tank, \$95. G. Thorpe, 4431 N. Hopkins St., Milwaukee 16, Wisconsin.

SPEND YOUR AUTUMN VACATION spearfishing in our clear waters. Attractive housekeeping cottage under our oaks sleeping four with private swimming beach \$6 a day including use of sailboat. Alden yawl charters just above cost. Four shallow sunken wrecks. Snappers, groupers, redfish, jewfish, octopi, mantas and sharks. Write Lt. Col. J. L. Hitchings, USA, Ret., Oak Harbor, Southport, Florida.

\$50.00 REWARD will be paid for information leading to the recovery of the high pressure air compressor (Mod. 3321 Ingersoll-Rand, 4 Cyl. Air cooled) and filter tanks stolen from the rear of the Wilshire Gun House, 12203 Wilshire Blvd. WLA. Stolen July 31 (no questions asked). BILL LEWIS, 321 So. Cliffwood Ave., Los Angeles 49, Calif. EXbrook 33008.

AMAZING quick release 2" nylon belts, 12 lbs. of lead discs (6), adjustable, will not slip—\$8.00. Discs available. Tommy Amerman, 7096 S. E. Hazel Rd., Portland 6, Oregon.

SURPLUS Cornelius compressors, \$150.00. Converted for Aqua-Lung filling. Pressure up to 2500 lbs. Complete, ready to go. 110v $\frac{1}{2}$ hp motor, air filter. For information, T. E. Amerman, 7096 S. E. Hazel Rd., Portland 6, Oregon.

ROLLEIFLEX underwater camera cases for rent. Latest Rolleimarin by Hans Hass, twenty dollars per day. French Ondiphot, ten dollars a day. New Sampson Underwater Camera Case with 16mm Bell & Howell Camera, twenty dollars per day. Dr. Nelson E. Mathison, 3515 East First Street, Long Beach, California. Phone Long Beach 828-51.

FOR SALE—Famous Standard Aqua-Lung, spare tank, filling attachment, lead weight belt, \$150.00, all near new. John Kabelka, 1418 Mermaid Avenue, Brooklyn 24, New York.

"MEDITERRANEAN HUNTER", by Bernard Gorsky, a complete guide to underwater hunting and exploration. A European best-seller, with superb photographs. Price \$2.25, postpaid. Remit to: Peter F. Hobson, 79 Southbrook Rd., Exeter, England.

ABALONE IRONS

Made of $\frac{1}{4}$ " corrosion resistant aluminum. Weight only 9 ozs. **GUARANTEED NOT TO BEND.** Money back if not satisfied. Mail \$2.50 check or money order to: Clair Roberts, 649 - 25th Street, San Bernardino, California.

IN HAWAII, it's VAL'S, 2401 Kalakaua, Waikiki. Headquarters for diving gear and conversation. Handmade wooden goggles. Authentic Hawaiian Slings and Spring Steel Spears. Hawaiian Spears adapted to fit Arbaletes. More accuracy, greater penetration. Prices on request. Aloha.

FOR SALE—Powerhead, .38 Smith & Wesson blank cartridge. Works perfect. Art Taylor, 6722 Make Avenue, Los Angeles. Telephone LUDlow 1-6653 after 5 p.m.

DIVING REGULATOR for sale—\$50.00. Good as new Sport Diving Lung regulator. Has been tested. Usable down to 60 feet. For more information telephone Capitol 1-6976 or call at 3515 Lifur Avenue, Los Angeles 32, California, Wayne Frick.

STANDARD Aqua-Lung, one hour tank with air reserve. Used three times. Cost \$160, will sell for \$120. Frank Kara, days HO 3-6871, nites State 9-4193. (Los Angeles)

JOIN BAHAMA CRUISE

Spearfish and explore sunken wrecks in the warm crystal clear waters of the Bahamas. Sail for three glorious days on 65' schooner for only \$50, all expenses. Reduced rates to clubs and groups. Mike Burke, 6960 Indian Creek Drive, Miami Beach, Fla.



\$19.95

WESTERN JET

Powerful New CO2 Cartridge Type Gun

- $\frac{3}{8}$ " solid steel shaft
- Positive safety
- Automatic line release

Ask your Dealer to show you
the Western Jet
or order from

WESTERN TOOL & SALES
P.O. Box 743, Westminster, California

**The Only Gun that is
Guaranteed for its life**

- Out-shoots, out-kills all rubber type guns
- Hardened detachable Sabre head

UNDERWATER CAMERA CASES

Custom made of clear plastic or metal to fit your camera and light meter

Motion picture or still
Complete external controls

Discount to Dealers
Call Volmer Jensen

Production Models Shop

104 E. Providencia Ave.
Burbank, Calif. THornwall 2-8753

SPEARFISHING SUPPLIES

Arbalete Guns, Masks,
Snorkle Tubes, Spears,
Frog Feet, Swim-Fins,
Bel-Aqua Suits,
etc.

WOODY'S Sporting Goods

127 N. Tamarind, Compton, Calif.
NE 1-6728

One Block north of Bank of America

Aqua-Lungs
Sales - Rentals - Refills
"Squale" Masks
Spearguns - Rubber Suits

AQUA SPORT DIVERS

16015 E. 8 Mile Rd.
East Detroit, Mich.

SEATTLE SKIN DIVING HEADQUARTERS

*Aqua-Lungs & Refills
Pirelli, Seal & Bel-Aqua Suits
Masks & Fins & Guns*

Write for Literature

PUGET SOUND DIVERS CO.

2520 WESTLAKE AVE., NO.
SEATTLE, WASHINGTON

ILLINOIS

AQUAVENTURERS

By GEORGE SATNESS

With the spell of hot weather that has played hob with a few records has come an outpouring of skin divers and aquaungers that the beaches and resort areas have never seen before.

Let me go on record as saying that I am prideful of the conduct of all but a scattered few who must exist to do foolish things. Let's keep up the good work, boys.

Here's a subject that I feel is becoming more and more important to deal with . . . the subject of "Build It And Drown Yourself" items that more and more "dealers" are selling simply to make a couple more bucks on. I suggest that anyone who has an idea that he wants to make up his own diving rig contact a reliable dealer or better yet, a diver who is a dealer, and ask his advice as to the many problems involved. I will say this: In diving there is no middle ground, you are safe or you are in trouble.

Here is a perfect example . . . Only a couple of weeks ago, a young fellow went out to Montrose Beach to try out his home made rig, an open helmet type outfit. Instead of a weight belt he used diving shoes, having some trouble, he dumped the helmet, and due to the shoes, was drowned.

The thought that I am trying to bring out is: he thought he was doing the right thing, too. Let us all try to bring about safety in our sport, not sorrow.

"Let float and knife protect your life."
See you next month. ➤

CALIFORNIA

SACRAMENTO SKIN DIVERS

By DICK HARDIE

The Sacramento Skin Divers have been fairly active this summer. Dwight Jopson and Dick Hardie made a trip to Bahia De Los Angeles in Dwight's Taylorcraft airplane the first week in June. They stayed a full week and had a large time. They are not recommending such a trip in a 65 H.P. T-Craft—overloaded!

Bahia De Los Angeles, incidentally, is approximately 300 miles south of the U.S. border on the gulf side of Baja California.

There have been numerous trips to Ft. Ross, Bodega Bay, Ft. Bragg, Pebble Beach, etc. Most trips were without incident except the last one to Bodega Bay. Al Tobal, Ray Merriman, Don Harty, Boyd Stewart (transplanted So. Calif. diver) and Dick Hardie were snug in the sack at Doran Park, Bodega Bay, dreaming of large abs and fish. Dick became aware of a pair of headlights glaring in his eyes. Out of the car stepped Al's wife, Jane, with—of all things—Al's rubber suit.

Al was pounding his ear, still innocent of the fact his rubber suit had been left behind 120 miles, in Sacramento! Jane had the kids in the car asleep, so left the suit with Dick and headed back without further ceremony. Next morning, Saturday, groans of anguish rolled back the dripping fog as Al discovered the absence of his suit. He wouldn't be consoled even when reminded that after ten minutes in the icy water he would be too numb to feel the cold anyway.

Just before breakfast, Dick remembered the arrival of Al's suit, so the meal was enjoyed by all—especially Al. Bet he double checks his double bag next week! ➤

RENTALS • AIR REFILLS

70 cu. ft. \$1.25 38 cu. ft. \$1.00
Open every day 8 A.M. to 10 P.M.

SEAL'S

1916 Newport Blvd. Costa Mesa, Calif.

CALIFORNIA

PACIFIC GROVE LOONEY GOONIES

By WAYNE V. DYE

This spring and summer has been a busy and gratifying season for the Pacific Grove "Looney Goonies" as we have had the opportunity to awaken public interest in the sport with several lectures, diving exhibitions, narrated movies and slides shown to various clubs.

The hi-lite of our spring season has been trips to Catalina Island by Bob McCurdy, De Marsh, Dan Toms, Louis Shapiro, Eva Toms, Bull Curry and myself. While in these waters we were fortunate in finding and filming a 16mm color movie aboard the Valiant, a twin screw encrusted hulk that remains upright on the ocean floor 120 feet down.

Although color values changed somewhat (red turned dark brown) we secured clear footage at \$1.5 due to light reflected from the white sandy bottom.

On the fifth and last dive we attached a plastic plaque to what little remains of the stern railing announcing the fact to any fish that could read, that we had indeed been there.

Incidentally, while at Catalina we contacted Al Hanson (local deep sea diver) who proved to be invaluable in pumping our bottles and directing us to the best diving spots. Al will soon have a party boat available to skin divers and we suggest any divers in quest of real adventure to look him up.

Soon we hope to have all club members "20 fathom men". Bob McCurdy and De Marsh set our club record by diving to 205 feet and plan to penetrate deeper.

The club "en masse" traveled to Carpenteria reef for three days in search of bugs, but murk reduced our bag considerably. (Zero, in fact.)

We were glad to meet some of the Santa Barbara Seals.

Several weeks later we dove on the "Harlech Castle", a sunken bark near San Simeon. Violent surge and heavy murk prevented us from filming the wreck, but we plan to film both sections of the ship in the early fall.

We cordially extend an invitation to all skin divers to stop in and dive with us while on Monterey Peninsula.

Next month we will join the Council of Diving Clubs and take a more active interest in skin diving legislation. ➤



"You're right, by George, it is low tide!"

New Jersey's Complete Selection

Swimfins — Masks — Rubber Suits
Snorkels — Aqua-Lungs — Guns

ROBERT KISLIN'S

Sporting Goods

710 Main Street Asbury Park, N. J.

busy and
the "Looney
Opportunity to
watch several
movies and

been trips
De Marsh,
Bull Curry
we were
6mm color
screw enter
the ocean

what (red
footage at
white sandy

attached a
ons of the
y fish that
n there.

contacted
proved to
and direct
soon have
ers and we
adventure to

members "20
Marsh set
r and plan

Carpenteria
, but murk
in fact.)
the Santa

e "Harlech
on. Violent
om filming
sections of

to all skin
while on

I of Diving
est in skin



DUILIO MARCANTE ascends near Vulcano.
Photo by H. Heberlein,
Lugano, Switzerland.



By Hilbert Schanck, Jr. and Henry Kendall
A completely new book, with all the very
latest information about equipment and
techniques that have been developed in
the last five years for:

**Helmet Diving—Mask Diving—Self-
Contained Diving Equipment and the
Latest Spearfishing Equipment and
Techniques.**

In addition to ready made equipment now avail-
able, there are many practical hints on equip-
ment you can make. 260 pages, illustrated. At
your bookstore or divers' supply dealer or send
\$4.00 and we will ship it postpaid.

CORNELL MARITIME PRESS, Cambridge, Maryland

Mid-Western "Skin Divers"

Fall means cooling water. Be prepared with a
quality Rubber Suit. We can supply the best.
Bel-Aqua - Seal - La Jolla - DESCO - Pirelli
Popular Suit Kits (3 popular brands)

Dry Suits need internal insulation. We can supply

the finest.

Wool or Neoprene Underwear - Insul-Air Thermal
Socks - Rubber Gloves
Cold water can effect your lung, use a proven cold
water unit, "Aqua-Lung", tested by use in Air
27°F above freezing, in water 32.4°F.

You name it, we have it or can get it for you.

SPORT DIVER CO.

1523 W. State St.

Milwaukee 3, Wisconsin

"Home of the Mid-West Amphibians"

SKIN DIVERS

- TANKS FILLED
- CERTIFIED AIR
- AQUA-LUNGS
- SPEAR GUNS
- RUBBER SUITS
- MASKS - FINS

SPORTLAND

406 So. Lake Ave.

PASADENA, CALIF.

Mon. Eves., 9:30

SY 6-6505

at

Virgin Islands

"The Skin Divers Paradise"

DELIGHTFUL CLIMATE ALL YEAR ROUND

AQUA-LUNGS
For Sale or for Rent - Refills

Large stock of
UNDERWATER EQUIPMENT
Cressi - Champion - Hurricane
Pirelli - Squalo - Voit - etc.

at

"La Belle France"

C. & M. Caron Main Street
St. Thomas, U. S. Virgin Islands

NEW JERSEY

DIVING JETS

By ART NELSON

The summer activities of the group have centered around Florida and Bermuda in the main. President Jay Bartels made a trip to Florida purposely to photograph Manatees but was unsuccessful due to their infrequent appearance at this time of the year. He did, however, return with considerable footage of underwater scenes from Alexander Springs, Blue Springs and the reefs near Miami.

Tom Stevenson, John Miller, Phil Ferri, El and Art Nelson spent time at Marathon, Vaca Key, Florida. All the help possible was given to make our stay enjoyable by the Bartels, owners of the Sea Horse Motel (who cater to skin divers) and Midge and Norm Beaulieu who represent The Florida Frogman at Marathon. Snappers, Moray eels, Barracuda and Groupers were seen all around the waters of Marathon, especially out at the U.S.C.G. station on Sombrero Key.

Bill Chadwick, Ian Smith and Jim Coyle re-

ported that all spear guns are confiscated in Bermuda when potential underwater hunters arrive at the island but are returned to owners upon their departure. The boys were allowed hand spears and cameras, though, and they remarked that with the aid of Jeanne and Park Breck of Undersea Tours, Warwick, Bermuda, they had an enjoyable vacation.

Further activities for the Jets this season includes cooperation with the New Jersey State Department of Conservation and Economic Development Fish and Game Division which is conducting a survey of fish in fresh water areas as well as along the coast. Through our affiliation with the New Jersey Underwater Fishermen, Inc., we are aiding the division in general survey work and the Creel Census. A brief film on the subject showing some of the lads in action were flashed to television viewers of A.B.C. network's John Daly News show, July 29, with a few of Jay's underwater shots included. Week end trips are anticipated to the Jersey shore and Montauk, Long Island, N.Y. to fill out the diving season.

AQUA-LUNG REFILLS

Complete Line of Skin Diving Equipment

Lyle A.

HOSKIN & SON

2527 WEST COAST HIGHWAY -- NEWPORT, CALIF.
OPEN 7 DAYS A WEEK

CALIFORNIA**KELPTOMANIACS**

By BEECH LASWELL

One of our new members, Russell (Hammerhead) Storkan, has become an avid student of marine biology and hopes to enter Scripp's Institution of Oceanography some time in 1956, after obtaining a BA from U.C.L.A., an entrance requirement.

In his unending research he has disclosed to us some interesting and educational facts about our "finie" friends, the fish.

So, next month or the month following, Hammerhead Storkan and myself will endeavor to compile some readable and interesting facts concerning our "finie" pals. We think most of you will find this, as we did, not only of interest, but also educational.

I know all our members were greatly taken by Russell's lecture at our last meeting. We hope you will find it of interest, and derive some enjoyment from it.

Michael Harrold, our club president, has been assisting Russell in his research and cataloging.

Every Saturday after diving we, that is, Russell and his illiterate assistant, proceed to take our day's catch apart before we lug them up the cliffs. We are all delighted to have our fish cleaned for us, although some times the lads get carried away and we end up with scales and bone. Especially when Doctor Storkan becomes hungry—he prefers his fish raw with salt and lemon. This must be the material for a marine biologist!

We have been noticing a few divers, apparently unattached, loading their guns before entering the water. Also, one Saturday morning we observed some divers guzzling wine on the beach, then strapping, or I should say tying on



BEECH LASWELL, Kelptomaniac, with two hand-caught horned back whales(?). Catalina.

some homemade units, then venturing forth to the realm of Neptune. We need not point out that either of these practices is **Suicide—or Murder!**

Congratulations to the winning teams of the Junior and Senior Pacific Coast Championships. Also to all contestants.

We appreciated the cooperation of all contestants, which made our job as Safety Committee much easier. Thanks also to Bev Morgan of the L. A. County Life Guards.

Attention Dealers**LOOK! LOOK! LOOK!**

A completely vulcanized suit made in the United States, by a rubber manufacturer who is now celebrating his 75th year in the rubber business. Listed below are some of the important facts about the manufacturing of this suit.

1. High Elasticity
2. Improved tear strength
3. Fullness where needed
4. Double thickness where needed
5. All seams vulcanized
6. Points of stress reinforced

CHEAPER IN PRICE THAN ANY OTHER VULCANIZED SUIT

ALL DEALERS ARE INVITED TO SEND FOR CATALOG.

FULL DISCOUNTS TO ALL DEALERS

Wet and Dry Suits with Neck and Waist Entries

Made expressly for Hal-Steck Sales
By Parker Stearns and Co.

SOLE DISTRIBUTORS:

HAL-STECK SALES

300 Sheffield Ave., Brooklyn, N.Y.
Telephone Dickens 2-0500

Underwater Sportsmen!

Everything for the Skin Diver

AQUA-LUNG
"SEAL" SUITS
MASKS
FINS
GUNS

Write for illustrated leaflet

James **BLISS**
& CO., INC.

342 ATLANTIC AVENUE
BOSTON 10, MASS.

Tel: HU 2-4130

Established Over a Century

WISCONSIN**MID-WEST AMPHIBIANS**

By FRED ROBERTS

July was a big month for the Amphibians. At our July meeting our new lake survey program was started, and will continue, henceforth, to give us a working knowledge of lake clarity and seasonal changes of all lakes penetrated by our members.

Two groups of our members had a taste of salt water this last month on their vacation. All agree that those living on the coast are a lucky bunch of people. Chuck and Jean Walker, our vice president and secretary, visited friends on the West Coast, namely Southern California. Chuck really had a ball spearfishing off the shore and off charter skin diving boats. He shot a small shark and had pictures to prove it to us.

Ralph Korbel, Dan Pavlet, and yours truly did our salt water diving off Miami and the Florida Keys. This included 300 feet of Kodachrome movie film taken on the reefs by myself.

All of the groups are not back yet, but I'm sure all will agree that the inland lakes will be a little drab for quite a while.

The majority of the club that stayed behind also had themselves a time. July 18 the club was at Moose Lake, one of the other local clubs, the Milwaukee Aqua Club, was also there and all had a swell time. July 25 the group dived in Lac La Belle. August 1 the third attempt to the steamer Toledo failed in Lake Michigan, all agreed "that sure is a big lake".

Our next meeting will be August 4. The diving calendar for August will be set up and our fall program started. Our membership is open to anyone interested in our sport, in fact, even if you don't want to join the group, you are welcome to come with us on our outings. Our address is Mid-West Amphibians, P. O. Box 1524, Milwaukee 1, Wisconsin.

Spearfishing at Catalina

SPECIALLY EQUIPPED CRUISER

MARAY

Trips every Sat. & Sun.

7:30 A. M. FARE \$6

For reservations phone —

Pierpoint Landing

L.B. 70-0408 or NEv. 6-5759

Reservations held until 7 A.M.

N O W ! Aqua-Lungs rented and filled with water-compressed air aboard the boat.

ANOTHER**SAN CLEMENTE TRIP**

SEPTEMBER 8th and 9th

\$15 incl. food — Limit 10
For information call Skipper at
Long Beach 90-9070 or 89-695

Dive in calm, clear water with convenience and safety

FOR CHARTER ANYTIME
20 Passengers — \$102.50



DIVE ON TIME

1/3 DOWN AND 12 EASY PAYMENTS

Check below the items you need. Mail this coupon with your remittance and your equipment will be shipped (freight collect) upon receipt of your signed conditional sales contract.

DESCRIPTION	PRICE	1/3 DOWN PAYMENT	BALANCE PLUS CARRYING CHARGE	12 MONTHLY INSTALLMENTS OF
		OUT OF CALIF.	4% TAX IN CALIF.	
<input type="checkbox"/> Std. Aqua-Lung	160.00	53.34	59.74	115.19 9.60
<input type="checkbox"/> Double Tank Aqua-Lung	260.00	86.68	97.08	187.19 15.60
<input type="checkbox"/> Triple Tank Aqua-Lung	295.00	98.35	110.15	212.38 17.69
<input type="checkbox"/> Junior Aqua-Lung	125.00	41.67	46.67	90.00 7.50
<input type="checkbox"/> Std. Arbalete	19.95	6.65	7.45	14.36 1.20
<input type="checkbox"/> De-Luxe Arbalete	24.95	8.31	9.31	17.96 1.50
<input type="checkbox"/> Seal Suit (long w/hood) Small <input type="checkbox"/> Medium <input type="checkbox"/> Large <input type="checkbox"/>	54.95	18.32	20.52	39.56 3.30
Additional U. S. D. Equipment				
<input type="checkbox"/>		-----	-----	-----
<input type="checkbox"/>		-----	-----	-----
<input type="checkbox"/>		-----	-----	-----

TOTAL DOWN PAYMENT

Total Monthly

Please find enclosed my check , money order , \$..... to cover my down payment on the items checked above.

This equipment is being financed through the "Timeplan Bank Financing".

The information below is true and complete and is given to induce you to grant me credit. (Please print or type)

Name In Full.....	Age.....	Name of Spouse.....	No. of Dependents.....
Residence Address.....	City.....	Phone.....	
Employed By.....	Address.....		
How Long.....	Position.....	Monthly Take- Home Pay \$.....	Other Income \$.....
Monthly Take-Home Pay of Spouse \$.....	Employed By.....		Bus. Phone.....
Your Bank.....	Branch.....	Loan.....	Checking.....
Do you Own Automobile.....	Make.....	Year Model.....	Mortgaged to and Address.....
Name and Address of Nearest Relative, not living with you.....			Relationship.....
Location of Improved Real Estate You Own.....		Mortgaged to and Address.....	

....., Date.....
Signature

— DEALERS —
WRITE TO US
IF YOU WISH TO
SHARE IN THIS PLAN

MAIL THIS COUPON AND REMITTANCE TO:

U. S. DIVERS CORP.

1045 BROXTON AVE.

WEST LOS ANGELES 24, CALIF.

NATIONAL FROGMAN CLUB NEWS

By L. R. COSGROVE
Executive Director

We have recently moved our National Frogman Club headquarters from 1428 South Maple to larger quarters at 2500 West 7th Street in Los Angeles. Because of the great increase in our membership and the many renewal memberships we've received, we felt this move was necessary so that we could have the most adequate facilities to serve our members in the best way possible.

This move is part of the expansion program we are planning for the Club. We would appreciate it very much if, when writing to the National Frogman Club, you would address your mail to our new address. Otherwise, it will take us longer to receive your letters and therefore delay our answers.

Everyone, both members and non-members, are invited to come in and visit our new Headquarters any time from 9 to 5, Monday through Friday.

Tex Robertson, our director from Texas, and William Loeffler, our director from Massachusetts, are expected to be in Los Angeles sometime in September to get in some "West Coast Spearfishing" and soak up a little of our California Sunshine!

We've just received a letter from William Loeffler, director of photography and water safety for the National Frogman Club, telling us that he is planning on "tying the knot" in August. Bill says his fiancee is a very sweet girl and he is happy about the whole thing. We're happy for you, too, Bill—CONGRATULATIONS!

Club President Frank Rodecker has been appointed to serve on the committee for the writing of a booklet on the safe use of breathing units (water lungs) and the instruction in their use which will be put out by the Los Angeles County. The title of the booklet is "Manual of Water Safety and Operation and Instruction for Breathing Units". The booklet will be available to anyone interested as soon as it is published. ■

HAWAII

DEPTH DEVILS

By BERT SEABOURN

Haleiwa Park, Haleiwa, Oahu, 17 July . . . teams comprising of two members each, from the Depth Devils aqua-lung club, assembled at the beach for the first monthly fish shoot tournaments. At 1200 hours, rafts and innertubes were launched with the more industrious ones swimming out to the better fishing grounds.

Upon reaching the outer reef, the rafts were secured to the jagged coral and the fishing got under way. The CO2, spring, and the many different rubber powered types used, all proved effective as all teams brought up a large number of qualifying fish.

After the two hour time limit, the shoot was over and everyone started for the shore. As the rafts and swimmers neared the beach, Hawaiians lined the shore and many waded water to be the first to see catches which the swimmers netted. The winning team, which got the largest fish, was Leonard Moody and Frederick Walther, with Moody doing the shooting. The fish was a 5-lb. "blow fish". Second honors for most fish speared, determined by the total weight, went to Stan Peters and Lawrence Barnes. The teams that participated in the shoot were: Frederick Walther and Leonard Moody; Stanley Peters and Lawrence Barnes; John Weininger and Dean Sanders; Guy Rowell and Tom Anelli; Bert Seabourn and Frank Reasner; Glen Lane and John Harper; Charles Hubbard and James Morgan; Bill House and John Prinice. ■

CALIFORNIA

DOWNEY ABGRABBERS

By JOHN NAST

A new skin diving club has just been formed in Downey, California, not far from Los Angeles. Ray Welland, R. D. Keays and nine other skin diving enthusiasts have been working for several weeks on the organization of a constitution and other matters pertaining to starting such a club. We have five officers appointed by the charter members, to hold office until our first election, which is to be held in January, 1955. The appointed officers are: Ray Welland, president; R. D. Keays, vice president; Jerry Carson, secretary; John Ekstrand, treasurer; and John Nast, public relations.

During the organization period we've been meeting about once a week. Our regular meeting time is still undecided. It will most likely be a week night once or twice a month.

Besides diving, the Abgrabbers are presently interested in building up the club and getting favorable publicity for both the club and the sport in general. Anyone interested in contacting us can write the Abgrabbers, c/o Ray Welland, 10241 Fallon Ave., Norwalk, Calif.

Our members can usually be found on Saturday and Sunday in coastal waters near Los Angeles. Other plans for the future include a weekend on Catalina and another at Ensenada.

On August 12 the club put on a display of equipment, movies and an open discussion of skin diving for the Downey Sportsman's Club. This meeting was brought about by John Ekstrand, a member of both clubs, with the goal of promoting better relations between skin divers and other sportsmen. ■

CALIFORNIA

NEWPORT HARBOR SUB-MARINERS

By SERGIE BELTRAN

On behalf of the Newport Harbor Sub-Mariners, I wish to congratulate one of Southern California's most outstanding skin divers, and proud to say, a member of the Sub-Mariners, Mr. Ron Merker. Not satisfied in spearin a huge 175-lb. Black Sea Bass a few weeks ago, Ron speared "sine auxilio" "without assistance", a 203 pounder, a possible world record. Ron has now fulfilled his life's ambition, that of spearing a larger fish than Herb Sampson's "Nunc rascasi". Now you may rest, Ron!

Under Doctor's orders, Ham Crum had to resign as president and leave the water for a few months. The gavel was passed to Pat Gordon, who, no doubt, will do a good job of leading the Sub-Mariners. Bob Tucker succeeded Bob Frazier as vice-president.

Gary Taylor, mascot of the Sub-Mariners, has done it again! The Sub-Mariners every once in a while have a raffle at a club meeting. Terry Cox, club sponsor, donated one of his beautiful Balboa Swim Shirts. Gary was asked to pull out the stub from the bowl. Guess who won the shirt? Last meeting, Mart Toggweiler donated a free trip on the Maray, and again Gary won. Some guys have all the luck. By the way, these raffles are an excellent way of building up the club treasury, since the money taken in is 100 per cent profit.

During the month of May, a group of Sub-Mariners spent 2 weeks at Guaymas, Mexico. The trip was two-fold, that of spearfishing and the taking of surface and underwater movies, which proved to be very successful.

Any divers around the Newport Harbor area or vicinity are welcome to attend any of the meetings which are held at the Tar Pit in Newport Beach. For information contact the Waterwear Company, 6902 Coast Highway, Newport Beach, Ph. Harbor 3798. ■

MAINE

COAST OF MAINE NEPTUNES

By DON LAMONT

We are continuing to arouse considerable interest in underwater swimming and spearfishing in this area even though our catches of fish have been negligible. Our members have gotten plenty of flounder and pollack, but so far no one has taken a fish over three pounds.

Five of us were invited to try our luck at the Isles of Shoals, a group of rocky islands lying five miles off the Maine coast. We were quite certain that we would get some big fish out there, but had no luck. We did manage to pull up an old anchor which our skipper estimated to be 60 years old. Then we got caught in a storm which got so bad that a couple of our members donned their cold water suits and stood by ready to go over the side. The climax to the whole deal came when our skipper slipped and laid his big toe open right down to the bone on the fluke of the anchor we had found. Luckily, there was a doctor staying at the hotel on the Islands, and he patched him up with two shots of penicillin and a tetanus shot. We were all happy to get back to the mainland.

The club is presently negotiating to secure compressed air for filling lungs at a price somewhere near reason. One of our members has been paying three dollars to have a standard tank filled to 1800 pounds, which we think is fantastic.

September is oyster month up here. The oyster beds in the upper Piscataqua river are supposedly contaminated, but we are going to request permission from the Maine Sea and Shore Fisheries to bring a load of them down into the lower Piscataqua and leave them there for a year to see what develops. A diver with no lung can pick up three or four bushels in an hour's time. ■

CALIFORNIA

SQUID SQUEEZERS

By VERNE PECKHAM

We have been diving for about four years but only became organized as a club last year. There are about twelve active members each with his own special interest in the sea. Four of us are interested in the marine sciences. Chuck Herkirk (our vice president) and Don Josland are studying Ichthyology. Chuck has a collection of some preserved marine tropicals taken from Acapulco, Guam, and Ensenada. Laurence Richardson (our secretary) and I are interested in Marine Invertebrates. I have a collection of approximately 50 mounted and preserved crabs. Ranging from the small Porcelin crab to a matched pair of Sheep crabs. All four of us belong to the student department of the Oakland Public Museum.

Even though most of us aren't spearfishing enthusiasts, we do carry guns around in case we run into a large lingcod, or Wolf Eel. So even though we don't have big fish records to our credit, we have had experiences. For instance, there was the time Jack Cutting killed a Cabozone with his ab iron, or when Dick Cole (our treasurer), and I helped raise a 21 foot cabin cruiser from the floor of Monterey Harbor, or the time when we were diving with 40 m.p.h. surface winds. That day was exceptionally cold since none of us had suits.

I visited the blood warm tropics of Laguna Beach during the middle of July. I was surprised to see how dirty the water is compared to Carmel, but the temperature of the water makes up for the loss of visibility. I was surprised to find a lobster on the pilings of Newport pier. I thought they always hid in holes and caves. Maybe he was just lost.

Even though our little club isn't the best organized, and we don't follow parliamentary procedure at every meeting, we all have fun, especially while squeezing squids. ■

PTURES

derable in spearfishing of fish have gotten plen- far no one

luck at the islands lying were quite big fish out- age to pull our estimated caught in a couple of our suits and The climax skipper slipped down to the had found. at the hotel am up with us sh. We mainland. trying to secure price some members has a standard we think is

. The oyster are suppos- to request Shore Fish- en into the there for a with no lung in an hours



PAT O'MALLEY, Dolphin, and Mac McClintock as seen on TV program "Fishing Flashes" in the Southern California area soon after Pat landed this 64-lb., 4-oz. record White Sea Bass. This fish was speared at Catalina Island in the early morning hours and the weighing at Pierpoint Landing, Long Beach, was in the late afternoon. Estimated weight loss was four pounds.

CALIFORNIA

NEWPORT PROTEUSONS

By DENNIS TUCKER

It happened about six months ago. That is, it was about six months ago that a few teen-age boys from Newport Harbor decided to organize a diving club, and thus the Newport Proteusons were created. The age limit is from 10-16 years. We now have nine very enthusiastic members under the guidance and supervision of Ron Merker, past president of the Newport Sub-Mariners. Acting as assistant advisor is Bob Tucker, also of the Newport Sub-Mariners. The purpose of this organization is to promote safety and good judgement in the water as well as to learn as much as possible about skin diving.

We have had some interesting meetings at which we have learned from experienced skin divers the art of skin diving, safety, and how to care for our equipment. Also in the near future we are going to have some underwater movies and talks about exploring the depths of the blue Pacific.

Last week we had a beach meet which was very successful. It was held at the Balboa jetty. John Sibert and I tied for first place with a catch of three fish each. Harry Kelso came in second with two nice fish to his credit. A plaque will be given at the end of each month to the one spearing the most fish for that month.

The officers consist of President, Dennis Tucker; Vice President, Bill Wilson; and Secretary-Treasurer, Craig Cordrey. Anyone in the Newport Harbor area interested in joining this thriving skin diving club may contact any of the officers. Their phone numbers are as follows:

Dennis Tucker: Liberty 8-4949; Bill Wilson: Harbor 1157; Craig Cordrey: Harbor 1648W.

CALIFORNIA

VAL-RAYS

By ART MASON

With vacation time in our midst, various club members are taking the advantage and diving at new locations. Bill Burroughs and his family camped out at Refugio for a week and really had a ball. Don Plummer and Joel Borne went up to see them on their last weekend and were rewarded by helping to land a 40-lb. Bat Ray. Don and Bill teamed up and both speared the ray. Then with one on each side towed it to shore. This seems to be a practical method for handling unwieldy fish.

The next day, Bill helped an unidentified diver land a 3 1/2-ft. shovel-nose shark. Many smaller fish were taken for the frying pan.

This month's meeting went off as usual. Two new members were introduced. The new members are Gene Taylor and Tom Fitzgerald. Gene and Tom are really eager and are both completely outfitted. Tom has a 70 cu. ft. Aqualung. This boosts the club's total to five lungs and seven "air's".

The Jamboree was discussed and Bill and myself are to pick up the club's tickets at the August Council meeting.

A trip to Ensenada over Labor Day was planned and it looks like it will be a club affair with most members participating.

The club has been asked to lecture and give a demonstration to the Optimists Club. Next month's report will cover the happenings.

Noting the letter of thanks in the last issue, I have one statement to make. Let's buddy up so we can have some buddies to dive with.

Anyone wishing to contact me, my new address is: 7146 Sunnybrae Ave., Canoga Park, Calif. >

HEADQUARTERS IN NEW ENGLAND FOR SKIN DIVING SUPPLIES

Aqua Lungs and Refills
Swim Fins and Masks
Pirelli, Bel-Aqua and Seal Frogsuits
French, American and Italian Spearguns

Write for Free Catalog

BILL'S AQUA SHOP
181 LOWELL STREET
METHUEN, MASSACHUSETTS

JERRY'S Diving Equipment

1036 Ave. "C" Redondo Beach, Calif.

All Skin Diving Equipment Carried
Complete Lungs from \$29.95 to \$160.00
Speargun Repairing
All Lung and Regulator Repairing
Water Skis, Paddle Boards
Boats 12 ft. and up
Official Checking Station
Derby — Sept.-Oct.
Mail Orders Accepted
OPEN 8 A.M. TO 8 P.M.
7 DAYS A WEEK

New thrills await you with AMERICAN SEASHELLS

By R. TUCKER ABBOTT

This beautiful big book, 541 pages plus 80 pages of color and black and white plates, paintings and drawings, covers definitive identifications of some 1500 varieties on Atlantic, Pacific and Gulf Coast Shores.

Don't miss it! A big \$12.50 value.

order from

THE SKIN DIVER

P. O. Box 128-AS Lynwood, California

VISIT

RODE ISLAND

Excellent Spearfishing Waters
Striped Bass - Tautog - Flounder

For Your Spearfishing Needs

Aqua-Lungs - Rebreathers - Refills

All parts to "Make Your Own Lung". Lungs Made to order. Any type. For best places to go, see me at

PERCY'S AQUA SHOP

42 Clear View Drive
Oaklawn, R. I. VALLEY 1-9206



HIGH SURF AT MAKAH

PHOTO BY TSUZUKI

Jantzen salutes the undersea pioneers

It has been almost half a century since Jantzen pioneered swimming, and since that time our knowledge of the world's waters has grown a thousand times.

Those who have contributed range all the way from scientists to daredevils, and include the channel swimmers, the oceanographers, the brilliant writers of the sea, the surfers of Makaha, Makapuu, and San Onofre, the men on rafts, and the daring unheralded others.

This brotherhood of marine experimenters and explorers owes the greatest thanks to the undersea pioneers—the skin divers who are on the threshold of one of the great adventures of mankind.

Jantzen salutes the skin divers. With their help, Jantzen is developing underwater equipment by skin divers, for skin divers.

Jantzen
THE PIONEERS IN SWIMMING

LOS ANGELES 17, CALIF.

630 WEST FIFTH ST.

SERIALS DIVISION

LOS ANGELES PUBLIC LIBRARY



JANTZEN INC., PORTLAND, OREGON

TSUZUKI

ers
the
on
of
eir
ip-

, OREGON